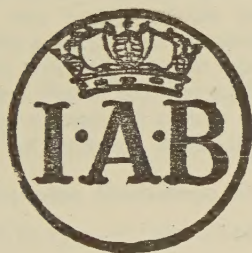


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HELMINTHOLOGICAL ABSTRACTS

incorporating
BIBLIOGRAPHY OF HELMINTHOLOGY
For the Year 1939.



IMPERIAL BUREAU OF AGRICULTURAL PARASITOLOGY
(HELMINTHOLOGY)

Winches Farm Drive, Hatfield Road,
St. Albans, England.

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HELMINTHOLOGICAL ABSTRACTS

INCORPORATING BIBLIOGRAPHY OF HELMINTHOLOGY

FOR THE YEAR 1939

Vol. VIII, Part 4.

256—Acta Japonica Medicinae Tropicalis.

- a. YOKOGAWA, S. & RO, M., 1939.—“Studies on the treatment of paragonimiasis. Part I. Experimental treatment and efficacy on dogs harbouring lung flukes (*Paragonimus westermani*).” 1 (1), 1-18.
- b. YOKOGAWA, S. & YUMOTO, Y., 1939.—“Investigations on the incidence of filariasis in Isigaki Island, Okinawa Prefecture.” 1 (1), 19-28.
- c. RO, M., 1939.—“Anaerobic glycogen consumption in *Ascaris* females and males (from swine).” 1 (1), 29-36.

(256a) In experiments on dogs infected with *Paragonimus westermani* intramuscular injections of prontosil soluble in combination with emetine hydrochloride brought about a rapid and radical cure. So combined the emetine speedily kills the flukes and the prontosil stimulates antibody production. Where treatment was successful a degeneration of some of the eggs was seen on the third day.

R.T.L.

(256c) Ro found that the average glycogen content of 167 male *Ascaris lumbricoides* (pig strain) was 5.37% of the body weight. The average amount in 150 females was 4.99%. An examination of 458 of the starving worms under anaerobiosis revealed that the rate of glycogen consumption was the same in both sexes during the first 24 hours. Thereafter the rate of consumption in females diminished rapidly till the end, while in males it fell on the second day but increased on the third.

W.P.R.

257—Acta Leidensia Scholae Medicinae Tropicae.

- a. LOPEZ CARDOZO, P., 1939.—“Cestoda and the problem of individuality.” 14, 138-145.

(257a) Discussing the individuality of cestode strobilae and proglottides respectively, and the question of “polyzoitism” Lopez Cardozo shows that there are numerous transitional forms between the unsegmented cestode at one extreme and the forms in which immature segments break away from the chain to complete their development as separate individuals at the other. The latter (and, presumably, later) type represents an asexual stock giving rise to sexual zooids. If the intact strobila is regarded as one individual, as it should be, the question of a “colony” does not arise.

B.G.P.

258—Acta Medica Scandinavica.

- a. BONSDORFF, B. VON, 1939.—“Liver extract exposed to the action of intestinal worms does not lose its anti-anaemic effect. *Diphyllbothrium latum* and pernicious anaemia. I.” 100 (3/5), 436-458.
- b. BONSDORFF, B. VON, 1939.—“The influence of intestinal worms on the proteolytic activity in vitro of trypsin, papain and pepsin and especially of human gastric juice at neutral reaction. *Diphyllbothrium latum* and pernicious anaemia. II.” 100 (3/5), 459-482.

(258a) Bonsdorff describes the results of a series of tests with autolysates, boiled extracts and alcohol extracts of *Diphyllbothrium latum* and autolysates of *Taenia* and *Ascaris*, to see if they had any inhibiting effect on the anti-anaemia factor of liver extracts. In most cases, injections of treated liver extract into P.A. patients was followed in a few days by injections of untreated liver extract. Effect was measured by reticulocyte and erythrocyte counts and haemoglobin determinations. There was no conclusive evidence of any inhibiting effect by the worm extracts, and this so far as it goes runs counter to the allergic theory of "Bothriocephalus Anaemia". B.G.P.

(258b) Continuing his experiments on *Bothriocephalus Anaemia* and its relation to P.A., Bonsdorff has tried to find out whether *Diphyllbothrium* interferes in some way with the activity of Castle's "intrinsic factor", which is probably a proteolytic enzyme. He mixed various tapeworm extracts with gastric juice, trypsin, pepsin and papain, and determined non-protein nitrogen after incubation, taking into account the worm's own proteolytic activity. Digestive activity of trypsin, pepsin or papain was in no case decreased by extracts of *Diphyllbothrium*, *Taenia* or *Ascaris*; moreover there was no evidence of anti-enzymes in the worm extracts, and worm protein was readily digested. However, all worm extracts inhibited the proteolytic activity of gastric juice at neutral reaction: if the gastric enzyme is identified with Castle's "intrinsic factor" the connection between tapeworm infection and P.A. is possibly explained.—The proteolytic activity of worms, greater in *Diphyllbothrium* than in *Taenia* or *Ascaris* and maximal at pH 4, is possibly due to cathepsin. B.G.P.

259—Acta Medica Scandinavica. Supplementum.

- a. TÖTTERMAN, G., 1939.—"Über Sternalmark und Blut bei Wurmträgern. (*Bothriocephalus latus*, *Taenia mediocanellata*). No. 104, 176 pp.

(259a) Tötterman reports on the cytology of bone marrow removed by sternal puncture and of the blood in 100 carriers of *Diphyllbothrium latum* (12 of them with pernicious anaemia), 11 carriers of *Taenia saginata*, and 22 healthy controls, all apparently from Finland. His results, which are set out and discussed in great detail, show that cytological changes due to broad tapeworm infection are very slight. Thus erythropoiesis is slightly retarded, and the neutrophile count in marrow is displaced to the left a little; the blood shows an insignificant eosinophilia and leucopenia. "Bothriocephalus Anaemia" cases gave a typical P.A. marrow and the achylia type of blood picture. *Taenia* carriers gave a more marked eosinophilia but normal erythropoiesis. B.G.P.

260—Agricultural Progress.

- a. CARROLL, J., 1939.—"The incidence of eelworm pests in Eire." 16 (2), 207-211.

(260a) In Eire the eelworm *Anguillulina tritici* is not at present a pest of much importance but occasionally is found in fields scattered throughout the country. *A. dipsaci* in oats is fairly common but usually only in patches in individual fields. *Heterodera schachtii* has not been recorded so far in cereal crops. This species has been recorded in clovers but there is no

evidence that it is responsible for deterioration of clovers in Eire. In potatoes, eelworm (*Heterodera schachtii*) occurs principally in light sandy and along the coast but it has also been found inland even in cut-away peat bogs. There is strong evidence that the spread of this eelworm is increasing. The potato strain of *A. dipsaci* occasionally causes rotting of tubers but it is not regarded as an important infection in Eire. There are many reports of the bulb-strain of *A. dipsaci* in onions. Root crops have not been found infected so far. *Heterodera marioni* has been reported from many private gardens and small glasshouses and it is expected that this pest will undoubtedly assume a greater degree of importance in the future, especially for commercial growers of tomatoes and cucumbers. *H. schachtii* has not been recorded yet in tomatoes. In strawberries *Aphelenchoides fragariae* is occasionally recorded but is not of particular importance. *A. ritzema-bosi* is now a source of much trouble in chrysanthemums in some nurseries and gardens. Cases of infestation of phlox by *Anguillulina dipsaci* are of common occurrence. The bulb-strain of *A. dipsaci* is widely distributed throughout Eire and great precautions will have to be taken to combat it by the new bulb-raising industry.

R.T.L.

261—Algérie Médicale.

- *a. COSTANTINI & BERNASCONI, 1939.—“Le kyste hydatique du Douglas chez l'homme.” 43, 41-46.

262—American Journal of Digestive Diseases and Nutrition.

- a. BASSLER, A., 1939.—“An interesting case of ascariasis.” 6 (5), 338-339.

263—American Journal of Hygiene. Section D. Helminthology.

- a. BARLOW, C. H., 1939.—“Seasonal incidence of infestation of the snail hosts with larval human schistosomes.” 30 (3), 73-81.
 b. SCOTT, J. A., 1939.—“Observations on infection with the common round-worm, *Ascaris lumbricoides*, in Egypt.” 30 (3), 83-116.
 c. CAUSEY, O. R., 1939.—“Description of three species of frog microfilariae, with notes on staining methods.” 30 (3), 117-121.

(263a) At El Marg, a village near Cairo, there is a seasonal fluctuation in the infestation rate of *Planorbis boissyi* and *Bulinus truncatus*, the Egyptian intermediaries of *Schistosoma mansoni* and *S. haematobium*. During winter the infestation is diminished. This is attributed by Barlow to the Nile flood, the cold weather and the “winter closure” of the canals. Infestations reached their percentage peak from July to October inclusive, i.e., in the hot season. During the winter months men can safely work in snail infested waters.

R.T.L.

(263b) In lower Egypt there is a widespread though not severe infestation with *Ascaris lumbricoides*. Infections do not tend to be concentrated in families as in other countries. The children and women have more infections than men. The proportion of children infected reaches a maximum before the age of 10, whereas this rises steadily to 20 in hookworm

* Original not available for checking or abstracting.

infestation. Hand to mouth transfer of eggs is the chief mode of spread in Egypt. There is little evidence of infection from vegetables or from dust or water. Owing to climate differences, infection is much lower in Upper than in Lower Egypt (20% as compared with 80%). Sanitary facilities in the home should, in Scott's opinion, afford the most effective means of control. R.T.L.

(263c) The microfilariae of *Foleyella brachyoptera*, *F. dolichoptera* and *F. ranae* from frogs in Florida and Louisiana, U.S.A., are described. The first 2 occur in *Rana sphenoccephala* and *R. pipiens*, the last in *R. clamitans*. Methods of staining with hemalum, methyl green pyronin, azur II eosin, and vital azur II are given. R.T.L.

264—American Journal of Tropical Medicine.

- a. KMECZA, J. M., 1939.—"The incidence of human intestinal parasite infections among patients in a State institution of Indiana." 19 (6), 515-530.

(264a) Kmecza records a single case of *Diphyllbothrium latum* from among 1,200 patients in the Longcliff State Hospital, Logansport, Indiana. The only other helminth recorded is *Enterobius vermicularis*. Faecal examinations only revealed infection in 1.6% of the males and 1.4% of the females examined. R.T.L.

265—American Midland Naturalist.

- a. OLSEN, O. W., 1939.—"*Dispharynx pipilonis*, a new spiruroid nematode from the red-eyed towhee (*Pipilo erythrophthalmus erythrophthalmus* (Linn.))." 21 (2), 472-475.
- b. RANKIN, jr., J. S., 1939.—"The life cycle of the frog bladder fluke, *Gorgoderina attenuata* Stafford, 1902 (Trematoda: Gorgoderiidae)." 21 (2), 476-488.
- c. HILL, W. C., 1939.—"*Spirocerca longispiculata* n. sp." 21 (3), 636-640.
- d. SCHULTZ, R. L., 1939.—"*Hymenolepis scalopi* n. sp." 21 (3), 641-645.
- e. AMEEL, D. J., 1939.—"Cercariae infecting *Pomatiopsis lapidaria* Say." 21 (3), 651-656.

(265a) Olsen describes *Dispharynx pipilonis* n. sp., a new nematode from *Pipilo erythrophthalmus erythrophthalmus* in Kentucky. The shape and size of the spicules serve as distinguishing features, the anterior half of the right spicule being slender, with a hook pointing ventrally and a very sharp ventral spine. P.A.C.

(265b) Rankin has worked out the life cycle of *Gorgoderina attenuata*, a trematode parasite of *Rana* spp. The miracidia penetrate the mollusc *Sphaerium occidentale* and develop to the sporocyst stage. This gives rise to a single brood of daughter cysts which give rise to cystocercous cercariae which are liberated into the water. These are picked up by tadpoles of *Rana sylvatica*, *R. clamitans* and *R. pipiens* in which they form cysts, particularly near the heart and liver. When taken in by the definitive host, excystment occurs and development to the adult stage occurs in the intestine, kidneys and ureters. Metacercariae have 9 testes which however undergo fusion to 2 during the final stages of development. P.A.C.

(265c) *Spirocerca longispiculata* n. sp. is a spirurid nematode living in the stomach of *Didelphis virginiana virginiana* in Oklahoma. This species differs from all others of this genus in the possession of pseudolabia, dorso-dorsal and ventro-ventral cephalic papillae, a long mesostom, asymmetric cervical papillae, divergent uteri and a more markedly posterior vulva. There is no gubernaculum. The male caudal papillae are stalked. P.A.C.

(265d) *Hymenolepis scalopi* n. sp. is a parasite of the mole, *Scalopus aquaticus intermedius*, in Oklahoma. It resembles most closely *H. erinacei* and *H. peipingensis* but can be distinguished by its size, the position of the testes, and the size of the cirrus sac which does not reach to the ventral excretory canal. The segments are very wide and the eggs large. P.A.C.

(265e) Ameel describes 3 cercariae which he has found parasitizing the snail *Pomatiopsis lapidaria* in Michigan. *Cercaria pomatiopsidis* has been described previously; it occurred in 1.3% of the snails. *Cercaria geddesi* n. sp. occurred in 13.4% arranged in clusters in the liver. It resembles *C. nodulosa* but is smaller. *C. marilli* n. sp. is a monostome cercaria resembling *C. urbanensis* which can reach maturity in ducks. Similar feeding experiments with the new species however gave negative results. P.A.C.

266—Anales de la Clínica Quirúrgica.

- *a. ROJAS, A., 1939.—“Un caso de hidatidosis subcutánea múltiple.” 1, 84-87.

267—Anales del Instituto de Biología.

- a. CABALLERO Y C., E., 1939.—“Sobre la presencia de *Cotylotretus grandis* (Rud., 1819) Odhner, 1910, en las aves de México.” 10 (1/2), 65-72.
- b. CABALLERO Y C., E., 1939.—“Nemátodos de los reptiles de México. III.” 10 (1/2), 73-82.
- c. CABALLERO Y C., E., 1939.—“Acerca de la presencia de *Tracheophilus sisowi* Skrjabin, 1913, en los patos domésticos de México y algunas consideraciones sobre las especies hasta hoy conocidas de este género.” 10 (3/4), 269-273.
- d. CABALLERO Y C., E., 1939.—“Nemátodos de los reptiles de México. V.” 10 (3/4), 275-282.
- e. CABALLERO Y C., E., 1939.—“Algunos endoparásitos de *Rattus rattus norvegicus* y de *Rattus norvegicus albinus*, del laboratorio de investigaciones medicas del hospital general de la ciudad de México.” 10 (3/4), 283-291.
- f. BRAVO HOLLIS, M., 1939.—“*Contracecum caballeroi* n. sp. (Nematoda: Heterocheilidae) parásito de *Anhinga anhinga*.” 10 (3/4), 293-296.

(267a) Caballero gives a brief account of the family Cotylotretidae and of *Cotylotretus grandis* which is here recorded from *Ajaja ajaja* in Mexico.

R.T.L.

(267b) Two new nematodes parasitic in Mexican reptiles are named *Ophidascaris ochoterenai* n. sp. from *Drymarchon corais melanurus*, and *Camallanus magnorugosus* n. sp. from *Chrysemys ornata*. Some new hosts are recorded for known forms.

R.T.L.

(267c) *Tracheophilus sisowi* Skrjabin, 1913 is redescribed from *Anas boschas* (?) in Mexico.

R.T.L.

* Original not available for checking or abstracting.

(267d) *Spironoura intermedia* n. sp. occurs in *Kinosternon hirtipes*. It is differentiated from *S. affine* and *S. concinnae*. The papillae of *Camallanus magnorugosus* are revised. *Spiroxys contortus* is reported from *Chrysemys ornata* in Mexico. R.T.L.

(267e) In 100 rats caught in Mexico *Cysticercus fasciolaris* occurred 6 times. In 2 of these cases the parasite had produced a malignant growth of sarcomatous type in the liver. The other helminths found were *Hymenolepis diminuta*, *H. nana* var. *fraterna* and *Heterakis spumosa*. R.T.L.

268—Annales de la Société Belge de Médecine Tropicale.

- a. DARTEVELDE, E., 1939.—“Sur les mollusques de deux foyers à bilharziose du Bas-Congo.” 19 (2), 157-160.
- b. BRUYNOGHE, G., 1939.—“Recherches sur les propriétés antigéniques des microfilaires de *Dirofilaria immitis*.” 19 (3), 335-353.
- c. RODHAIN, J. & BERGHE, L. VAN DEN, 1939.—“*Paraloea anthropopitheci* genre et espèce nouveaux de Filarioidea chez le chimpanzé du Congo belge.” 19 (3), 445-452.

(268a) Dartvelde lists the water-snails from 2 foci of urinary schistosomiasis in the Lower Congo, namely, Kimpata, where *Physopsis africana* is thought to be the intermediate host; and Mateba Island, where either *Ancylus* sp. or *Segmentina kanisaënsis* is probably incriminated.

J.J.C.B.

(268b) Using specific antigen, Bruynoghe has no evidence of the production of precipitins in rabbits and guinea-pigs infected with microfilariae of *Dirofilaria immitis*. Complement fixation and intradermal tests were also negative. However, mildly positive intradermal tests were obtained from two young dogs with these microfilariae. He was, however, able to obtain strong positive intradermal and complement fixation reactions with this antigen among human patients carrying *Loa loa*. Similar positives also occurred in some, but not all, the patients carrying *Acanthocheilonema perstans*. He is unable to give the reason for these contradictory results.

P.A.

(268c) Rodhain & van den Berghe describe a new species of filarial worm from *Pan satyrus*, which was found in the muscle sheaths of the forearm and in the sub-cranial connective tissue. A new genus *Paraloea* is formed for the species, which resembles *Loa* in having cuticular bosses but differs from it in that the bosses are less prominent and are absent from the anterior extremities of male and female and from the posterior extremity of the male. Furthermore the spicules resemble those of *Dirofilaria* rather than of *Loa* and the microfilaria is sheathless. The microfilaria resembles *Mf. perstans* very closely but certain morphological differences are indicated. The authors believe that previous records of the occurrence of *Mf. perstans* in chimpanzees and gorillas in reality appertain to the microfilaria of their new species *Paraloea anthropopitheci*.

J.J.C.B.

269—Annals of Applied Biology.

- a. JOHNSON, L. R., 1939.—“Further observations on *Anguillulina dipsaci* in rhubarb.” 26 (4), 739-749.

(269a) Johnson reports observations on a disease in rhubarb associated with infection by the stem eelworm, *Anguillulina dipsaci*. He has set up the disease in rhubarb seedlings and small setts by growing them in infected soil and describes the course of infection in these. He has also found that the strain of the parasite attacking rhubarb is a non-specialized one since it attacks and causes disease in oats, peas and chickweed and will also invade seedlings of mangold and cabbage: in these last two hosts however it does not persist. T.G.

270—Annals and Magazine of Natural History.

- a. BAYLIS, H. A., 1939.—“Further records of parasitic worms from British vertebrates.” Ser. II, 4 (23), 473-498.

(270a) This list of helminths obtained from wild British vertebrates and especially British birds supplements an earlier list published in 1928. Their collection, preservation and to some degree their determination has been the work of Mr. S. Prudhoe. The month in which each species was collected is usually recorded. The species recorded number 124 trematodes, 88 cestodes, 83 nematodes and 16 acanthocephala arranged alphabetically in each class. No new species is included. A number of corrigenda to the 1928 list are appended. R.T.L.

271—Annals of Tropical Medicine and Parasitology.

- a. JOHRI, L. N., 1939.—“On a collection of cestodes from a peacock (*Pavo cristatus* L., 1758) from the Terai Forest area, India.” 33 (3/4), 211-216.
b. GORDON, R. M. & LUMSDEN, W. H. R., 1939.—“A study of the behaviour of the mouth-parts of mosquitoes when taking up blood from living tissue; together with some observations on the ingestion of microfilariæ.” 33 (3/4), 259-278.

(271a) Johri has recovered 5 cestode species from the intestine of a peacock, *Pavo cristatus*, killed near the river Sharda. Of these *Cotugnia taiwanensis* and *Raillietina volzi* are already known. There were specimens of another species of *Raillietina* which, however, he has not been able to identify. He describes *Raillietina* (*Paroniella*) *symonsii* n. sp. which distinguished from almost all other species of the genus by the possession of 10 to 11 testes. *Cotugnia longicirrosa* n. sp. is interesting in that the testes form a single continuous band. Though it closely resembles *C. fuhrmanni* there are distinct differences particularly in the number and size of the rostellar hooks and in the size and position of the various parts of the genitalia. P.A.C.

(271b) Gordon & Lumsden studied the mechanism of feeding of mosquitoes by observing *Aedes aegypti* in the act of taking blood from a frog's web. Penetration of tissues and capillaries, unlike previous observers' conceptions, is shown to take place in almost any direction owing to the great flexibility of the fascicle at its tip. Blood is taken up either directly from a capillary or from an extravasation of blood from a previously lacerated capillary. This latter method is designated “pool feeding”. Fluid, presumably salivary secretion, is injected into the tissues at various stages of penetration. Microfilariæ, present in the frog's blood, were not observed to move purposively towards the site of feeding, but were seen to

be capable of movement against the blood stream. An explanation is put forward of the fact that individual mosquitoes fed on the same host may pick up greatly varying numbers of microfilariae and of the fact that, on the average, mosquitoes pick up a relatively greater concentration of microfilariae than is to be found in finger-prick blood.

J.J.C.B.

272—Antiseptic. Madras.

- *a. GHOSH, J. M., 1939.—“Dracontiasis or guinea-worm infestations.” 36, 410-411.

273—Archives d'Électricité Médicale.

- a. BROU, R. & JAUBERT DE BEAUJEU, A., 1939.—“Documents radiographiques sur la guérison par vomique d'un kyste hydatique pulmonaire.” 47 (643), 1-4.

274—Archives de l'Institut Pasteur d'Algérie.

- a. ALCAY, L., MARILL, F. G., MUSSO, J. C. & CASTRYCK, R., 1939.—“Première enquête sur le foyer de bilharziose vésicale de Saint-Aimé-de-la-Djidiouia (Oran).” 17 (3), 421-428.

275—Archives des Maladies de l'Appareil Digestif et des Maladies de la Nutrition.

- a. LANDAU, A., DELOFF, L. & BRAUN, R., 1939.—“Hernie diaphragmatique droite. La non spécificité de l'épreuve de Casoni dans le kyste hydatique.” 29 (5), 531-542.

276—Archivio Italiano di Chirurgia.

- a. VALDONI, P., 1939.—“Idro-pneumotorace idatideo spontaneo.” 55, 495-503.

277—Archivio Italiano di Medicina Sperimentale.

- *a. GAETANI, G. F. DE, 1939.—“Azione tossica e potere anafilattogeno del liquido cistico idatideo ; rassegna sintetica.” 4, 261-274.

278—Archivos Argentinos de Neurología.

- a. LUQUE, O. & BRANDAN CARAFFA, C., 1939.—“Hidatidosis raquídea.” 20 (1/2), 12-35.

279—Archivos de Pediatría del Uruguay.

- *a. BONABA, J. & SOTO, J. A., 1939.—“Provocación experimental del neumociste perivesicular en el niño.” 10, 325-329.

* Original not available for checking or abstracting.

280—Archivos Uruguayos de Medicina, Cirugía y Especialidades.

- a. DÉVÉ, F., 1939.—“Au sujet de l' ‘equinococosis preperitonéal’.” 15 (1), 49-55.
- b. CHIFFLET, A., 1939.—“Táctica operatoria en la equinococosis peritoneal múltiple.” 15 (3), 211-221.
- c. PIAGGIO-BLANCO, R. A. & GARCÍA-CAPURRO, F., 1939.—“Quiste hidatídico de la cabeza del páncreas. Importancia de la radiología para su diagnóstico.” 15 (3), 245-251.

281—Australian and New Zealand Journal of Surgery.

- a. CHRISTIE, H. K., 1939.—“Hydatid cysts in both lungs.” 8, 373-387.
- b. PULLAR, T. H. & NORTH, J. H., 1939.—“Ruptured hydatid cyst of heart.” 8, 399-403.

282—Australian Veterinary Journal.

- a. GORDON, H. McL., 1939.—“The efficiency of various concentrations of solutions of copper sulphate against *Haemonchus contortus*.” 15 (5), 216-218.
- b. ROBERTS, F. H. S., 1939.—“The value of phenothiazine in the treatment of oesophagostomiasis in sheep.” 15 (6), 237-244.
- c. GORDON, H. McL., 1939.—“The anthelmintic efficiency of phenothiazine.” 15 (6), 245-252.
- d. GORDON, H. McL., 1939.—“The occurrence of *Diphyllbothrium latum*, the broad fish tapeworm, in dogs in Australia.” 15 (6), p. 256.
- e. LEGG, J., 1939.—“A note on intussusception (gut-tie) in sheep.” 15 (6), 257-258.

(282a) In the treatment of young sheep with copper sulphate a 2% solution is efficient in 81.2% of the cases treated, compared with 66.6% with a 0.5% solution and 29.4% with a 10% solution. The difference between a 2% solution and a 0.5% solution was not statistically significant, and a 0.5% solution was found to be efficient in a greater proportion of cases than a 10% solution. Gordon is of opinion that a 4% solution gives the optimum dose rate. If it is considered undesirable to raise the copper sulphate dose rate, recourse can be had to a mixture of copper sulphate and nicotine sulphate, of which a dose of 30 ml. of a 4% solution is efficient for adult sheep. It is pointed out that the dose rates for various classes of sheep may have to be adjusted, and that for small poorly grown Merino types the rates usually prescribed may be too large. R.T.L.

(282b) Phenothiazine given as a dose of 0.4 g. per pound body weight is an efficient anthelmintic for the treatment of *Oesophagostomum columbianum* in sheep but is somewhat less satisfactory for lambs. The principal disadvantage of the drug is its bulk, 16 g. being required for a 40 lb. lamb. The chief factor which affects the efficacy of the drug is delay in its passage to the large bowel, due to constipation, quantity of ingesta in the colon and the condition of the sheep. The chemical is also very efficacious against *Haemonchus contortus* but has no value against *Trichuris* spp. R.T.L.

(282c) Gordon is of opinion that a great deal of further work is required before Phenothiazine can be introduced as a practical treatment for helminthiasis, but considers that it offers great promise for the successful treatment of oesophagostomiasis by drenching. He states that it removed from 60% to 100% of oesophagostomes in nearly 78% of the sheep he has

treated. It is also a very efficient anthelmintic against *Haemonchus contortus* although, owing to difficulties in obtaining suitable infected sheep, he was not able himself to determine its efficiency with any degree of certainty.

R.T.L.

(282d) Three cases of Diphylobothrium infection in dogs in New South Wales are reported by Gordon. The worms were identified as *D. latum* by Baylis. This species has hitherto been recorded only from immigrants in Australia.

R.T.L.

(282e) Although the presence of *Oesophagostomum* nodules may have provided an anatomical basis for the intussusception in one of the two cases here recorded by Legg, it could not in his opinion have been responsible for that in the second case.

R.T.L.

283—Boletim Biológico.

- a. TRAVASSOS, L., 1939.—“Um novo trematódeo parasito da garças: *Ribeiroia insignis* n. g., n. sp. Anexo N.3 ao ‘Relatório da excursão científica do Instituto Oswaldo Cruz realizada na zona da E.F.N.O.B., em outubro de 1938.’” 4 (2), 301-304.
- b. FREITAS, J. F. TEIXEIRA DE & LENT, H., 1939.—“Revisão do género *Catadiscus* Cohn, 1904 (Trematóda. Paramphistomoidea). Anexo N.4 ao ‘Relatório da excursão científica do Instituto Oswaldo Cruz realizada na zona da E.F.N.O.B., em outubro de 1938.’” 4 (2), 305-315.

(283a) Travassos describes and figures *Ribeiroia insignis* n. g., n. sp. from the oesophagus of the heron, *Chasmerodius egretta*, from Mato Grosso, Brazil. The new trematode, which is placed in the Omphalometrinae close to *Chataemasia* and *Trifolium*, has a pair of oesophageal diverticula and extensive yolk glands in large follicles. Wright's *Distomum reticulatum*, placed by Harwood in *Chataemasia*, is transferred to *Pulchrosoma* Trav., 1916, where Bhalerao's *Testifrons cristata* probably also belongs. B.G.P.

(283b) Freitas & Lent redescribe *Catadiscus dolichocotyle* (Cohn), *C. cohi* Trav., and *C. pygmaeus* (Lutz, 1928) n. comb. — transferred from *Diplodiscus*, and describe two new species: *C. marinholutzi* from the intestines of *Leptodactylus ocellatus* and *L. caliginosus* in Brazil, and *C. uruguayensis* from the intestines of *L. ocellatus* in Uruguay. B.G.P.

284—Boletín del Ministerio de Sanidad y Asistencia Social.

- a. PIFANO C., F., 1939.—“Breve nota sobre algunos zoo-parasitos observados en el Estado Yaracuy.” 4 (4), 186-190.

285—Boletines y Trabajos de la Sociedad de Cirugía de Buenos Aires.

- a. IVANISSEVICH, O. & PIÑERO, T. A., 1939.—“Contralor post-operatorio en los quistes hidatídicos del hígado.” 23 (1), 14-19.
- b. CALCAGNO, B. N., 1939.—“Terapéutica biológica de la hidatidosis. Ensayos.” 23 (14), 481-498.

286—Bollettino e Memorie della Società Piemontese di Chirurgia.

- *a. MICHELI, E., 1939.—“Su di un caso di cisticercosi cerebrale.” 9, 1-23.

* Original not available for checking or abstracting.

287—*Bollettino della R. Stazione di Patologia Vegetale.*

- a. GOIDÀNICH, G., 1939.—“Note fitopatologiche. II. L'anguillulosi dell'ortensia.” *Nuova Serie*, 19 (3), 335-342.

(287a) Goidànich gives an illustrated account of a disease of hortensias (probably varieties of *Hydrangea opuloides*) caused by the stem eelworm, *Anguillulina dipsaci*, which he has found damaging plants belonging to several varieties in the vicinity of Rome. The worms occur in the cortical tissues of the younger shoots in which swelling and distortion are set up accompanied by defoliation. The most susceptible varieties were “Marna”, “Cunert”, “Merveille” and “Amis Pasqual”; less susceptible were “Rosabella” and “Goliath”, whilst the variety “Molière” appeared not to become infected.

T.G.

288—*Brasil-Medico.*

- a. FERREIRA LOPES, C., 1939.—“A schistosomose intestinal em Theophilo Ottoni.” 53 (45), 1013-1017.

289—*Bratislavské Lekárske Listy.*

- a. DZIUBAN, M., 1939.—“Necjastější střevní paraziti člověka, vyskytující se na Karpatské Ukrajině.” 19 (7), Suppl., pp. 101-109.

(289a) [The most frequent intestinal parasites found in inhabitants of Carpathian Ukraine.]

290—*British Journal of Urology.*

- a. RAY, P. N. & RAO, S. S., 1939.—“Chyluria of filarial origin.” 11 (1), 48-64.

291—*British Medical Journal.*

- a. McCLEMENTS, S., 1939.—“A case of hydatid disease.” Year 1939, 2 (4118), p. 1140.

292—*Bulletin de l'Académie de Médecine. Paris.*

- a. GALLIARD, H., 1939.—“Existence et rôle pathogène spécifique de *Filaria malayi* au Tonkin.” 122 (27), 149-156.

293—*Bulletin de l'Académie Vétérinaire de France.*

- a. BRUMPT, L., DECHAMBRE, E. & DESPORTES, C., 1939.—“Prophylaxie et traitement utilisés pour combattre les acanthocéphales parasites des makis de la Ménagerie du Jardin des Plantes.” 12 (6), 198-202.
b. DESCAZEUX & CAPELLE, 1939.—“Contribution à l'étude des champignons prédateurs de larves de nématodes parasites des animaux domestiques.” 12 (7), 284-288.
c. CAUCHEMEZ, NAIN & PRUDHOMME, 1939.—“La laderrie des petits ruminants. Un cas de laderrie ovine.” 12 (7), 339-347.

(293a) Brumpt and his co-workers describe a loss of condition and failure of reproductive powers among the fine collection of lemurs at the Jardin des Plantes, in the winter of 1937-38, due to heavy infections with *Prosthenorchis spirula* and *P. elegans*. Fibrous nodules occur at the points of attachment, which are mainly at the posterior end of the small intestine, but the worms were also found attached to the parietal wall of the peritoneum—presumably after perforating the intestine. At the Jardin the vector was *Blatella germanica*; stringent measures were therefore taken against this cockroach, while simultaneously various anthelmintics were tested. Satisfactory results were obtained with repeated doses of 2 c.c. of a mixture of castor oil (16 c.c.) and Ascaridol (25 cg.). B.G.P.

(293b) Descazeaux & Capelle have found that the hyphomycete fungus, *Dactylella brachopaga*, successfully captures the larvae of strongylid nematode parasites of horse, ox and sheep by means of sticky projections on the hyphae. They have ascertained that the nematode-entrapping fungi, *Arthrobotrys oligospora* and *Dactylella bembicodes*, do not capture the larvae of lungworm parasites of the genera *Protostrongylus* and *Muellerius*, i.e., forms requiring an intermediate host. They state that the spores of these two fungi when eaten by horse or guinea-pig are destroyed by passage through the intestine and have no harmful effect on either animal. T.G.

(293c) After passing rapidly under review records of cysticerci in domesticated animals, other than pig and ox, Cauchemez and his co-workers describe a case of *Cysticercus ovis* from a sheep. This species is very rarely found in France. They show how the shape and size of the hooks preclude any confusion with *C. cellulosae*. B.G.P.

294—Bulletin Agricole du Congo Belge.

- a. BREDO, H. J., 1939.—“Catalogue des principaux insectes et nématodes parasites des caféiers au Congo belge.” 30 (2), 266-307.

(294a) In an illustrated account of the chief insect pests of coffee bushes in the Belgian Congo, Bredo deals briefly with the damage caused to the roots by the two parasitic nematodes, *Tylenchus coffeae* and *Heterodera radiculicola*, and indicates possible control measures. T.G.

295—Bulletins et Mémoires de la Société des Chirurgiens de Paris.

- a. DIAMANT-BERGER, L., 1939.—“Deux observations curieuses de kystes hydatiques du foie.” 31 (1/2), 31-33.

296—Bulletins et Mémoires de la Société d'Électro-Radiologie Médicale de France.

- a. BRETON, M., 1939.—“Un cas de cysticercose généralisée. (Cysticerques calcifiés visibles aux rayons X).” 27 (257), 147-150.
- b. LACHAPELLE, A. P. & DUMON, 1939.—“Ascaris et rayons X.” 27 (257), 191-193.

297—Bulletin Mensuel. Société de Médecine Militaire Française.

- *a. VOIZARD, 1939.—“A propos de l'helminthiase chez les indigènes.” 33, 251-256.

* Original not available for checking or abstracting.

298—Bulletin. Ministry of Agriculture and Fisheries. London.

- a. MOORE, W. C., 1939.—“Diseases of bulbs.” No. 117, 176 pp.

(298a) Although chiefly concerned with fungal diseases of bulbs cultivated for flowers, good accounts are also given of cestode diseases of hyacinth, narcissus and iris.

T.G.

299—Bulletin. New York Medical College.

- *a. IPPOLITO, T. & BOYD, L. J., 1939.—“Hepatic schistosomiasis: report of a case.” 2, 12-13.

300—Bulletin de la Société de Chimie Biologique.

- a. SMORODINZEW, I. A. & BÉBÉCHINE, K. V., 1939.—“Les lipoides de *Taeniarhynchus saginatus*.” 21 (9/10), 1194-1203.

(300a) From chemical analyses of 10 portions of *Taenia saginata*, Smorodinzew & Bébéchine have determined the various lipid fractions by a method which is described. Thus, expressed as proportions of total lipoids, the following were found: cholesterol, 12.39%; neutral fats, 75.42% (with a mean iodine-index of 151.31); lecithin, 5.41%; cephalin, 3.78%; cuorin, 3.13%. The cholesterol/fatty acids ratio is very low, indicating a small affinity to water.

B.G.P.

301—Bulletin de la Société de Pathologie Exotique.

- a. MARILL, F., ALCAY, L. & MUSSO, J., 1939.—“Un cas algérien de bilharziose intestinale autochtone.” 32 (8), 822-823.
b. ALCAY, L., MARILL, F. & MUSSO, J., 1939.—“Les réactions de floculation au cours de la bilharziose humaine. (Note préliminaire).” 32 (8), 836-842.

(301b) Alcay, Marill & Musso have examined the blood reactions in bilharzia infections among Algerian Moslems, Moroccans and Senegalese, using 3 precipitation tests, viz., the reactions of Meinicke, Chorine and Gaté. They were not equally useful but on the whole positive reactions were most frequently obtained among the Algerians, probably because the disease is of longer standing.

F.A.C.

302—Canadian Journal of Comparative Medicine.

- a. CAMERON, T. W. M., 1939.—“Destruction of eggs and non-infective larvae.” 3 (9), 248-254.
b. CAMERON, T. W. M., 1939.—“Destructure of infective larvae. B. Methods of destroying infective larvae (free or enclosed in egg shells).” 3 (10), 272-276.
c. MILLER, M. J., 1939.—“Trichocephalus and trichocephaliasis.” 3 (10), 282-287.
d. CAMERON, T. W. M., 1939.—“Avoidance of infection, destruction of adult parasites, avoidance of disease.” 3 (11), 310-317.
e. SWALES, W. E., 1939.—“Notes on the diagnosis and treatment of parasitic diseases of sheep in Canada.” 3 (12), 341-344.

* Original not available for checking or abstracting.

(302a) Cameron discusses the effect of chemicals on nematode eggs and larvae in faeces. The results depend on their composition and on the quantity used. The percentage of larvae which reach the infective stage and survive may be increased or there may be no effect at all. The larvae may still reach the infective stage and then exsheath without being killed immediately thereafter, or after reaching this stage they may be killed. All the eggs or free feeding larvae may be killed rapidly or only a few may be able to survive. The thickness of the larval sheath is probably an important factor in restraining the action of certain chemicals. Some chemicals are very effective as gases but are dangerous or at any rate unpleasant to handle. Cost is a controlling factor in the use of chemicals on a large scale. Crude chemicals may contain impurities which may affect the lethal action or act as plant poisons and so render the treated dung unusable. A list of chemicals which have been tested on infected horse faeces is given with the approximate percentages necessary to cause reasonably efficient sterilization in laboratory tests. The article discusses the value of selective disposal, of ploughing-in of manure, and of fly destruction.

R.T.L.

(302b) Cameron outlines the principles of helminth control by destroying infective larvae either in the free stage or while still enclosed in egg shells. (i) Disinfection (a) chemical, (b) heat, (c) cleanliness. (ii) Pasture (a) chemical treatment, (b) collection of droppings, (c) destruction of larvae by spreading and harrowing, by the burning of grass and by drainage. (iii) Climatic factors (a) cold, (b) sunlight. (iv) Reduction by mixed grazing and by dung feeding insects. (v) Mechanical removal by haying and by turfing and reseedling.

R.T.L.

(302d) Cameron discusses the general principles applicable to the prevention of infection by parasites. Particular attention is given to pasture management, the avoidance of infection in the grazing animal, and the development of host resistance to parasitic disease.

D.O.M.

(302e) The important helminth infections of sheep in eastern Canada are *Haemonchus contortus*, *Trichostrongylus* spp., *Oesophagostomum columbianum* and sometimes *Monodontus trigonocephalus*. At present clinical methods of diagnosis are better than microscopical examination of faeces upon which too much reliance has hitherto been placed. In Canada sheep graze the pastures for less than half the year. During the winter rest there is a high mortality in the pasture infection. The infection of the spring pasture is derived largely from infected stock. Highly efficient anthelmintic medication, e.g., Phenothiazine, should be used during the winter months to prevent pasture re-infection in the spring.

R.T.L.

303—Canadian Journal of Research. Section D. Zoological Sciences.

- a. CAMERON, T. W. M., 1939.—“Studies on the endoparasitic fauna of Trinidad mammals. VI. Parasites of edentates.” 17 (12), 249-264.

(303a) Cameron records some helminths from two species of anteaters and an armadillo from Trinidad, B.W.I. and describes 5 new species from these hosts, viz., *Lauroia trinidadensis* n. sp. from the armadillo, *Tatusia novemcincta*; *Delicata pseudoappendiculata* n. sp., *Longistriata urichi* n. sp., *L. cristata* n. sp. and *Pintonema tamandua* n. sp. from *Tamandua longicaudata*.

J.J.C.B.

304—Cervello. *Giornale di Neurologia*.

- *a. DONINI, F., 1939.—“Eosinofilorachia in paralisi progressiva.” 18, 174-180.

305—Chirurg.

- a. JANNOPOULOS, 1939.—“Der Wert der Echinococcusreaktion nach der operativen Entfernung einer Cyste.” 11 (11), 405-407.

306—Clinica Veterinaria.

- a. PIRANI, A., 1939.—“Strongilosi del bestiame dell'Impero Italiano con particolare riguardo a quelle degli equini ed alla loro speciale sintomatologia.” 62 (8), 477-484.
 b. BELTRAMI, B., 1939.—“Della localizzazione non comune di un nematode in un testicolo di puledro.” 62 (11), 630-633.

(306a) Pirani gives a brief account of equine strongylosis, which is very prevalent in Italian East Africa both in horses and mules, and also of a serious disease of camels ascribed to the trichostrongyle *Antistrongylus somalilensis*. This infestation is probably water-borne since the fodder of camels is mainly arboreal. Pirani's experience of equine strongylosis is unusual in that he found adult animals more heavily infested than young ones.

B.G.P.

(306b) Beltrami describes a case of a *Strongylus equinus* lying between the tunica vaginalis and tunica albuginea of a colt; the visceral and parietal coats of the former membrane were adherent, thus complicating castration.

B.G.P.

307—Comptes Rendus des Séances de la Société de Biologie.

- a. DÉVÉ, F., LESSERTISSEUR, M. & STEWART, B., 1939.—“Kyste hydatique et ondes courtes.” 132 (24), 241-243.

308—Cornell Veterinarian.

- a. BAKER, D. W., DANKS, A. G. & BRITTON, J. W., 1939.—“Treatment of trichostrongylosis in foals.” 29 (2), p. 238.
 b. MAYHEW, R. L., 1939.—“Studies on bovine gastro-intestinal parasites. 1. The mode of infection of the hookworm and nodularworm.” 29 (4), 367-376.

(308a) For the treatment of trichostrongylosis in Belgian and Percheron foals 300 to 325 c.c. of 1% copper sulphate and 1% nicotine sulphate was successful when given after a 12 hour fast. Four of the foals had between 230 and 801 trichostrongyle eggs per g. of faeces before treatment and were negative 2 weeks after treatment, and 2 foals with counts of 1,512 and 1,120, after treatment only showed 220 and 49 trichostrongyle eggs per g. of faeces respectively. The eggs were identified by culturing and diagnosing the resulting larvae.

J.W.G.L.

* Original not available for checking or abstracting.

(308b) Mayhew points out that although cutaneous infection of man and dog with hookworm larvae is well recognized there is as yet no experimental evidence of skin penetration of hookworms and nodular worms in cattle. He proceeds with carefully controlled experiments on calves to show that, experimentally, cutaneous infection can take place in calves with both the hookworm *Bunostomum phlebotomum* and with the nodular worm *Oesophagostomum radiatum*. These findings have an important bearing on the control measures to be adopted. J.W.G.L.

309—Deutsche Pelztierzüchter (Der).

- a. OLAFSSON, A., 1939.—“Findet fortlaufend eine Ausscheidung von Spulwurm- und Lungenwurmeiern im Kot statt?” 14 (9), 198-199.

(309a) Olafsson briefly reports the fact that in winter months it may be impossible to find eggs of *Ascaris* and *Capillaria* in the faeces of foxes which are none the less parasitized, apparently owing to a seasonal rhythm in oviposition. A single faeces examination that proves to be negative can thus be misleading. [See also Helm. Abs., Vol. VIII, No. 113a.] B.G.P.

310—Día Médico.

- a. WYBERT, A., 1939.—“Quiste hidático de hígado.” 11, pp. 195, 224.
 *b. REPETTO, R. L., 1939.—“Quiste hidatídico pulmonar (equinococosis pulmonar broncogenética).” 11, 591-597.

311—Farming in South Africa.

- a. MÖNNIG, H. O., 1939.—“Worms in sheep.” 14 (164), pp. 434, 464.
 b. NAUDE, P. J., 1939.—“The control of root-knot in tobacco by means of crop rotation.” 14 (164), pp. 442, 460.

(311b) Naude considers that dry-cultivation or crop-rotation are the best means of controlling root-knot eelworm. A satisfactory control of the eelworm on tobacco in the Oudtshoorn district of South Africa is obtained by a crop-rotation consisting of lucerne for 2 to 4 years, wheat or barley during the winter, followed by tobacco for 3 years. On heavily infested land no infection was observed on one-year-old lucerne, though certain weeds were badly affected. M.T.F.

312—Folia Medica.

- *a. TRONCHETTI, F., 1939.—“Ricerche sull'anemia da anchilostoma.” 25, 341-389.

313—Fukuoka Acta Medica.

- a. MIYAZAKI, I., 1939.—“Ueber eine neue Art von Lungendistom.” 32 (6), 1083-1092. [In Japanese: German summary pp. 59-61.]

(313a) Metacercariae of a species of *Paragonimus* other than *P. westermani* occur in *Sesarma intermedia* and *S. dehaani*. Adults were obtained by experimental feeding in mice, rats, guinea-pigs and cats. The

* Original not available for checking or abstracting.

species is different from *P. westermanni* in the following respects: (i) the cyst is oval and smaller, (ii) the cyst wall is very thin, (iii) the metacercaria is smaller and its buccal spear is half the length of that of *P. westermanni*, (iv) development in the definitive host is more rapid, (v) the ovary is finely branched while that of *P. westermanni* is coarsely lobed, (vi) the egg is smaller. The new species is not yet named. R.T.L.

314—Gazzetta degli Ospedali e delle Cliniche.

- a. TATTONI, A., 1939.—“Ulteriore contributo all'echinococcosi primitiva dell'omento.” 60 (11), 243-246.

315—Geneeskundig Tijdschrift voor Nederlandsch-Indië.

- a. BONNE, C. & SANDGROUND, J. H., 1939.—“Echinostomiasis in Celebe-veroorzaakt door het eten van zoetwatermosselen.” 79 (34), 3016-3034.
 b. BONNE, C. & LIE KIAN JOE, 1939.—“Over het veelvuldig voorkomen van een *Trichostrongylus*soort, vermoedelijk *Trichostrongylus colubriformis* (Giles 1892) in de darm der bewoners van Java.” 79 (45), 2868-2872.
 c. ESSED, W. F. R., 1939.—“Parasitologische diagnostiek voor den medicus-practicus in Nederlandsch-Indië. Hoofdstuk XIV. Onderzoek van faeces op protozoën en worminfecties.” 79 (46), 2918-2944.
 d. BONNE, C. & SANDGROUND, J. H., 1939.—“Over een tumor in de maag van de gewone Java-aap (*Macacus cynomolgus*) veroorzaakt door een nematode (*Nochti nocti*).” 79 (49), 3145-3148.
 e. ESSED, W. F. R., 1939.—“Parasitologische diagnostiek voor den medicus-practicus in Nederlandsch-Indië.” 79 (52), 3504-3527.

(315a) The focus of human echinostomiasis, found by Brug & Tesch in 1937 on the shores of Lake Lindoe in Celebes [see Helm. Abs., Vol. VI, No. 304d], has been the object of further study by Bonne & Sandground. Incidence was as high as 96% in one village and, as for intensity, 260 flukes were expelled by one case in a single stool, following treatment with tetrachlorethylene. The species resembles *Echinostoma malayanum* Leiper, 1911 but with some differences. An unidentified planorbid is the first intermediary. Various molluscs were found infested with echinostome metacercariae, but a commonly eaten fresh-water mussel is the important vector, as was proved by experimental infections of laboratory rats and mice and of the two authors. No reservoir hosts were found. B.G.P.

(315b) Bonne & Lie Kian Joe report the presence of *Trichostrongylus* (probably *T. colubriformis* and another species) in scrapings of the duodenal mucosa of 10 out of 40 Javanese patients. They draw attention to the possibility of confusing the ova with those of *Necator*, for, while the ranges of measurements are different, they overlap to some extent. B.G.P.

(315c) This section of Essed's compilation on parasitological diagnosis is mainly concerned with the human intestinal protozoa, but he also refers to a medium, used for helminth ova in faeces, composed of phenol 3, eosin 2, and glycerine 95. B.G.P.

(315d) Examination of more than 50 *Macacus cynomolgus* by Bonne & Sandground has revealed a close association between papillomata near the pylorus in the stomach of the monkey and the nematode *Nochti nocti*. Microscopically, the tumour is seen to consist of finger-like outgrowths of gastric mucosa covered by a single layer of epithelial cells, and downgrowths

into the submucosa. Worm tunnels and ova in the morula stage are also to be found. Experimental transfer of the worm, to an unaffected host by laparotomy and gastrotomy, leads to papilloma formation. B.G.P.

(315e) Continuing his exposition of diagnostic technique in parasitology [see No. 315c above], Essed here (*inter alia*) explains the preparation and staining of films to show microfilariae, differentiates *Mf. bancrofti* from *Mf. malayi*, and gives details for sending material by post. B.G.P.

316—Hospital. Rio de Janeiro.

- a. LENT, H. & PENNA, M., 1939.—“Novo caso de singamose em homem no Brasil.” 16 (1), 111-118.

(316a) Lent & Penna have recovered 5 pairs of *Syngamus laryngeus* from a woman living in the Covanca district. They describe the clinical symptoms caused by the worms and have also considered the structure of the worms themselves which are illustrated by drawings and photographs. P.A.C.

317—Imperial Bureau of Agricultural Parasitology (Helminthology). Publications.

- a. YOUNG, M. R., 1939.—“Helminth parasites of Australia. A bibliography with alphabetical lists of authors, hosts and parasites.” St. Albans, 145 pp.

318—Indian Journal of Medical Research.

- a. CHOPRA, R. N. & RAO, S. S., 1939.—“Chemotherapy of filarial infection.” 27 (2), 549-562.
b. IYENGAR, M. O. T., 1939.—“Differentiation of microfilariae of *Wuchereria bancrofti* and *Filaria malayi*.” 27 (2), 563-571.

(318a) Chopra & Rao investigated the treatment of filarial infection with a large number of drugs. The effects of various drugs in different dilutions on microfilariae *in vitro* was studied and patients at different stages of filarial infection were treated. No drug was found which had satisfactory antifilarial properties, but of the organo-metallic compounds, soamin appeared to be the most satisfactory in controlling the infection in the early stages, although it does not kill the parasite. Fouadin also appeared useful in this respect. Oil of chenopodium reduced the microfilarial count and the recurring attacks of lymphangitis. J.J.C.B.

(318b) Iyengar presents a detailed study, copiously illustrated, of the morphological differences between the microfilariae of *Wuchereria bancrofti* and *Filaria malayi*, based on material collected in India. *Microfilaria actoni* Rao, 1931, is merged into the synonymy of *Filaria malayi*. J.J.C.B.

319—Indian Journal of Veterinary Science and Animal Husbandry.

- a. BHALERAO, G. D., 1939.—“A few unusual helminths of some domestic animals in India.” 9 (4), 371-374.
b. RAO, M. A. N., 1939.—“On a species of *Joyeuxia*, Lopez-Neyra, 1927, from a cat (*Felis catus domestica*).” 9 (4), 377-378.
c. SRIVASTAVA, H. D., 1939.—“Cutaneous microfilariasis in Indian cattle. (Preliminary report).” 9 (4), 389-391.
d. SRIVASTAVA, H. D., 1939.—“The important helminth parasites of poultry—their treatment and control.” 9 (4), 393-409.
e. BAWA, H. S., 1939.—“Intestinal paramphistomiasis of sheep in Sind. (A preliminary report).” 9 (4), 425-429.

(319a) Bhalariao records for the first time in India, *Mesocestoides litteratus* from the cat, *Parastrongylus bovicola* from cattle and *Dictyocaulus filaria* from a buffalo, and describes the first 2 species. A coenurus of *Multiceps gaigeri* from the mucous membrane of the eye of a goat is also described.

J.J.C.B.

(319b) Rao describes a tapeworm from a cat which he thinks should be considered as *Joyeuxia chyzeri*. This is the first time the genus *Joyeuxia* has been recorded in Southern India.

P.A.C.

(319c) Srivastava describes a chronic form of skin disease of cattle in Bombay Province. Microfilariae were recovered from the skin and were seen in sections but were not found in the blood nor were adult worms found. The microfilariae were unsheathed, 0.252 to 0.28 mm. long and 0.004 mm. in breadth, and their incidence in the skin is subject to seasonal variations.

J.J.C.B.

(319d) Srivastava reviews our knowledge of helminth parasites of poultry, dealing with life-histories, prevention and treatment in particular. He stresses the importance of preventing outbreaks of disease by suitable hygienic methods as treatment is often difficult.

P.A.C.

(319e) Bawa describes a disease of sheep in Sind, caused by immature amphistomes in the duodenum and small intestines, where varying degrees of inflammation and pin-head haemorrhages were found post-mortem. The mortality of the sheep was at the rate of 2 or 3 per day. Good results were obtained by dosing some of the sheep with 7 c.c. carbon tetrachloride in 13 c.c. sweet oil per sheep.

J.J.C.B.

320—Indian Medical Gazette.

- a. HARE, K. P., 1939.—“An experiment in coolie line sanitation: effects on health.” 74 (6), 340-342.
- b. MAPLESTONE, P. A. & MUKERJI, A. K., 1939.—“The treatment of *Trichuris* infection with iron.” 74 (10), 607-609.
- c. CHOPRA, R. N., PASRICHA, C. L. & LAL, S., 1939.—“Hydatid disease of the lungs. A case report.” 74 (10), 621-622.

(320a) Hare reports the results of stool surveys of control coolie lines and a line in which a set of latrines of a particular design, previously described, had been adopted. The incidence of ‘water-sores’, probably the result of irritation of the skin caused by penetration of hookworm larvae, was apparently reduced since the latrines were introduced.

J.J.C.B.

(320b) The various forms of iron in common use for the treatment of anaemia are useless against *Trichuris trichiura*.

R.T.L.

321—Indian Veterinary Journal.

- a. ACHARYA, S. K., 1939.—“Experimental treatment of helminth parasitic infection of poultry with colloidal iodine or iodine vermicide.” 16 (2), 83-93.

(321a) Excellent results in eradicating helminths from poultry have been obtained by Acharya by the use of colloidal iodine. A 10% solution in water is made up and this is injected straight into the gizzard. Using 1 oz. of the solution for birds weighing 4 lb. and proportionate doses for

smaller birds, he found the treatment to be 89.4% effective. Both nematodes and cestodes were removed and when found in the faeces were mostly completely dead. P.A.C.

322—Japanese Journal of Experimental Medicine.

- a. NISHIO, K., 1939.—“Clinical studies on the disease caused by *Hymenolepis nana* (v. Siebold).” 17 (3), 319-331.

323—Japanese Journal of Veterinary Science.

- a. OHASI, M., 1939.—“Experimental studies on the *Cysticercus cellulosae*.” 1 (1), 1-46. [In Japanese: English summary pp. 44-46.]

(323a) Ohasi has found *Cysticercus cellulosae* common in pig and man in the Okinawa prefecture. In some cases pigs show definite symptoms including epileptiform attacks; cramp of the palm is a common symptom in man. Complement fixation was clearly manifested in sera from infected pigs and from rabbits and pigs subcutaneously injected with *C. cellulosae* emulsion. Slight reactions were obtained with other tapeworm antigens. The precipitin reaction was less marked. In both man and pig changes in the blood picture are confined to a slight eosinophilia in heavily infested cases: this is increased in man when *Taenia solium* is also present, as it is in 23% of cysticerciasis cases. B.G.P.

324—Japanese Journal of Zoology.

- a. YAMAGUTI, S., 1939.—“Studies on the helminth fauna of Japan. Part 28. *Nippotaenia chaenogobii*, a new cestode representing a new order from freshwater fishes.” 8 (3), 285-289.
b. YAMAGUTI, S., 1939.—“Studies on the helminth fauna of Japan. Part 29. *Acanthocephala*, II.” 8 (3), 317-351.

(324a) For *Nippotaenia chaenogobii* n. g., n. sp. from fishes, a new family Nippotaeniidae and a new order Nippotaeniidea are proposed. This new order is said to resemble the Cyclophyllidea especially in the character of the vitellaria but differs in the main excretory system which resembles that of the Pseudophyllidea. R.T.L.

(324b) Yamaguti lists and briefly describes 36 species of *Acanthocephala* in Japan. Of these 12 belong to the Echinorhynchidae and include 4 new species of which *Hypoechinorhynchus alacopis* n. sp. is type of a new genus. The other new species are *E. lotellae* n. sp., *E. dissimilis* n. sp. and *Acanthocephaloides neobythitis* n. sp. A new family Pomphorhynchidae includes 2 species of which *Pomphorhynchus sebastichthydis* is new. Of the 5 species of Centrorhynchidae *C. turdi* and *C. bubonis* are new. Five out of 6 of the species in Polymorphidae are new, viz., *Polymorphus eroliae*, *Prosthorhynchus charadrii*, *Porrorchis oti*, *Corynosoma phalacrocoracis* and *Bolbesoma nipponicum*. Three species out of 5 are new in the Rhadinorhynchidae listed, viz., *Rhadinorhynchus carangis*, *R. ditrematis* and *R. epinepheli*, while out of 4 species listed for the Neoechinorhynchidae 3 are new, viz., *Neoechinorhynchus coiliae*, *N. johnii* and *N. tylosuri*. The Gigantorhynchidae is represented by one species only, viz., *Mediorhynchus garruli* n. sp. R.T.L.

325—Journal of the American Veterinary Medical Association.

- a. BAKER, D. W., 1939.—“A systematic survey of the gastro-intestinal worm parasitisms of cattle.” [Abstract of a paper presented before the Section of Research at the 76th Annual Meeting of the American Veterinary Medical Association.] 95 (751), p. 483.
- b. STEIN, C. D., LUCKER, J. T., OSTEEN, O. L. & GOCHENOUR, W. S., 1939.—“Studies on the possible rôle of endoparasites in the transmission of infectious anemia.” 95 (752), 536-541.
- c. MUNDHENK, R. L. & GREENE, J. E., 1939.—“Blood parasites of the dog.” 95 (752), 551-554.
- d. BROWN, H. P. & AUSTIN, J. A., 1939.—“Treatment of heartworms in dogs with Stibsol—a new drug.” 95 (752), 566-569.

(325a) Faecal examinations made monthly at Ithaca, N.Y., between February 1937 and May 1939 on 66 dairy heifer calves from 6 to 8 months old gave at the beginning of the investigation data [not reproduced] which indicate that there was a period of about one year during which marked fluctuation in the worm burden (of *Trichostrongylus* spp., *Nematodirus* sp., *Trichuris* sp. and *Moniezia* sp.) occurred. During the remainder of the period the egg-counts became stabilized at a low level in most of the animals.

R.T.L.

(325b) Worms of the genus *Strongylus* from a case of equine infectious anaemia contained the virus of this infection. When a saline extract of the washed and macerated worms was injected into a normal horse the disease was reproduced. Similar infections made from cylicostomes gave a negative result. Saline washings of the worms before extraction also proved negative, indicating that the virus was completely absent from the external surfaces of the worms. Washings and saline extracts of third stage larvae did not transmit the disease on injection.

R.T.L.

(325c) Although the blood of 75% of the “pound” dogs examined by Mundhenk & Greene in Alabama teems with nematode embryos, in less than 1% of the animals were adult *Dirofilaria immitis* found at post-mortem. The only other parasite found after a most detailed examination of the whole of the tissues of the body was *Spirocerca sanguinolenta*. The authors conclude that the embryos were either those of *S. sanguinolenta* or of an unknown nematode. They remark that while moderate infections with *D. immitis* yield reasonably well to antimony treatment the concentration of the unknown embryos in the blood was not affected even when severe antimony poisoning was induced.

R.T.L.

(325d) Stibsol, which chemically is antimonial-3-catechol-thiosalicylic-acid-sodium and contains 30% of antimony, has proved effective in removing microfilariae from the blood stream and sterilizing or killing adult female *D. immitis* in the heart of dogs. A characteristic peak in the destruction of the microfilariae was observed after the second or third injection and again just before their disappearance from the circulation. The treatment was equally effective in heavy and light infections.

R.T.L.

326—Journal of Bacteriology.

- a. LEONARD, A. B., 1939.—“Resistance of rabbits to larval cestodes.” [Abstract of paper presented to the Missouri Valley Branch of the Society of American Bacteriologists.] 38 (2), 231-232.

(326a) Using 2,000 eggs of *Taenia pisiformis* as his dose to rabbits, Leonard finds that a marked reaction occurs in the liver resulting in the walling off of a large number of the developing larvae. About 55 larvae were able to continue their development and reach maturity. He gave the same dose of eggs to other rabbits which had previously been given intravenously a quantity of serum from rabbits heavily infected with *C. pisiformis*. In these animals only an occasional cyst was able to reach maturity and the host reaction in the liver was greatly speeded up so that developing larvae were completely walled up in not more than a week. P.A.C.

327—Journal of Biological Chemistry.

- a. SALISBURY, L. F. & ANDERSON, R. J., 1939.—“Concerning the chemical composition of *Cysticercus fasciolaris*.” 129 (2), 505-517.

(327a) Salisbury & Anderson obtained unusual results when analysing the chemical composition of *Cysticercus fasciolaris*. There was practically no reducing sugar present but 30% of the dry matter was glycogen. Dry matter amounted to 16%, was strongly alkaline and contained sodium, potassium, and magnesium and calcium phosphates. The lipoids and fatty acids were examined in detail and small amounts of a number of other substances were detected in the larvae. P.A.C.

328—Journal of the Ceylon Branch of the British Medical Association.

- a. WIJERAMA, E. M., 1939.—“Ancylostomiasis in Ceylon.” 36 (3), 193-196.
b. HOOLE, C. G., 1939.—“Pig as medium of helminthiasis.” 36 (3), 204-206.

(328a) Wijerama discusses the relationship between egg counts, intensity of infection and the degree of anaemia of hookworm cases in Ceylon. Analysis of 2,000 hospital admissions showed that hookworm disease is the most common disease in Ceylon and that hookworm infection is a predisposing factor in most of the other diseases. J.J.C.B.

(328b) Hoole examined the excreta of pigs from pig latrines in Kalutara district and concludes from his findings that pigs play an important part in the transmission of helminthiasis. J.J.C.B.

329—Journal of the Chosen Medical Association.

- a. ISHIHARA, A., 1939.—“Experimentelle Untersuchungen über die Eosinophilie. II. Mitteilung. Ueber die Eosinophilie nach der Injektion der Emulsion von *Ankylostoma duodenale*.” 29 (2), 222-228. [In Japanese: German summary p. 13.]
b. TYU, B. J., 1939.—“Studies of the endemic elephantiasis in Tyosen. (Part II).” 29 (8), 1426-1442. [In Japanese: English summary p. 93.]

(329a) An absolute eosinophilia was developed in guinea-pigs following subcutaneous injection of a saline extract of *Ancylostoma* larvae. Transference of serum from such activated guinea-pigs to others caused the development of an eosinophilia in the second group. This second reaction was prevented, however, if the vagus nerve or the spinal cord were cut below the level of the 6th cervical vertebra. Ishihara assumes, therefore, that the development of eosinophilia is not due directly to the presence of the worm material but indirectly through the production of an eosinotactic substance. P.A.C.

(329b) Elephantiasis is endemic along the southern coast of Saisyû Island. Practically all the patients are farmers but they do not work in paddy fields. The aetiological agency of this endemic disease has not been investigated.

R.T.L.

330—Journal of the Council for Scientific and Industrial Research. Australia.

- a. KAUZAL, G. P., 1939.—“Method for obtaining eggs and larvae of *Nematodirus* spp. for experimental purposes.” 12 (4), 339-341.
- b. GORDON, H. McL., 1939.—“A preliminary note on the anthelmintic efficiency of phenothiazine against *Trichostrongylus* spp. in sheep.” 12 (4), 345-347.
- c. GORDON, H. McL., 1939.—“A preliminary note on the chemotherapy of oesophagostomiasis of sheep with special reference to the efficiency of phenothiazine.” [Erratum.] 12 (4), p. 347.

(330a) Kauzal's method for obtaining *Nematodirus* eggs and larvae from the faeces of sheep with mixed infections of trichostrongylid worms is an adaptation of Sheather's sugar flotation technique. It cannot be summarized without loss of detail essential to the procedure.

R.T.L.

(330b) From preliminary trials on sheep experimentally infected with *Trichostrongylus* spp. Gordon finds that commercial Phenothiazine in doses of 0.6 g. per kg. body weight administered in capsules has a very high efficacy against these worms. When the dose was reduced to 0.3 g. per kg. body weight the degree of efficiency was reduced but satisfactory; the egg count being reduced by 70% or more.

R.T.L.

(330c) [An error occurred on p. 204 of this article which appeared in a previous issue [see Helm. Abs., Vol. VIII, No. 215a]. In the 10th line [of the original paper] “0.06 to 0.5 g.” should have read “0.06 to 0.5 grain.”]

331—Journal of the Egyptian Medical Association.

- a. BAYOUMI, M. L., 1939.—“Bilharzial myelitis.” 22 (8), 457-461.

332—Journal of Helminthology.

- a. GOODEY, J. B., 1939.—“The structure of the leaf galls of *Plantago lanceolata* L. induced by *Anguillulina dipsaci* (Kühn) Gerv. & v. Ben.” 17 (4), 183-190.
- b. CLAPHAM, P. A., 1939.—“Three new intermediary vectors for *Syngamus trachea*.” 17 (4), 191-192.
- c. CLAPHAM, P. A., 1939.—“On a sex difference in the infection rate of birds with *Syngamus trachea*.” 17 (4), 192-194.
- d. ROGERS, W. P., 1939.—“The physiological ageing of ancylostome larvae.” 17 (4), 195-202.
- e. MORGAN, D. O. & CORNER, H. H., 1939.—“Helminth parasites in lambs on a Scottish Border farm.” 17 (4), 203-210.
- f. FENWICK, D. W., 1939.—“Studies on the saline requirements of the larvae of *Ascaris suum*.” 17 (4), 211-228.
- g. ROGERS, W. P., 1939.—“A new species of *Strongyloides* from the cat.” 17 (4), 229-238.

(332a) J. B. Goodey describes and figures the anatomical changes induced in the leaves of ribwort plantain, *Plantago lanceolata* L., when attacked by the stem eelworm, *Anguillulina dipsaci*, and discusses the aetiology of the pathological conditions observed. T.G.

(332b) Clapham has found *Scolopendra* sp., the leather jacket *Tipula* sp., and *Sminthurus viridis* naturally infected with the larvae of *Syngamus trachea*. P.A.C.

(332c) Clapham gives evidence that hen birds are more susceptible to infection with *Syngamus trachea* than cock birds. Post-mortem examinations of partridges have shown that the infection rate and the death rate in females is higher than in males. Experiments have shown the same to be true for chickens. P.A.C.

(332d) Rogers has estimated the activity, infectivity (by Goodey's "floating raft" method) and fat content (by staining methods) of ageing 3rd stage larvae of *Ancylostoma caninum* at regular intervals. The initial fall in activity and fat content was greater than the fall in infectivity, especially in slowly aged larvae. Small numbers of larvae were found to be infective even when the fatty food reserves seemed exhausted. The reduction in activity and fat content occurred at a similar rate. Dark granules, possibly excretory products, were found to accumulate in the intestinal walls of old larvae. W.P.R.

(332e) Morgan & Corner give accounts of the various species of helminths found in lambs and show that a considerable worm population may be present even when no outward symptoms of disease are evident. They conclude that, where land is heavily stocked with sheep, extra feeding and anthelmintic treatment are important factors in preventing serious outbreaks of parasitic disease. D.O.M.

(332f) Fenwick performed a series of experiments on *Ascaris* larvae and evolved a suitable antagonised saline in which they lived $5\frac{1}{2}$ days. They were insensitive to pH changes between pH 5.0 and pH 9.0. Glucose exerted no beneficial effects at concentrations below 1.0% and above this appeared to be toxic. D.F.

(332g) Rogers has described a new parasite, *Strongyloides cati* n. sp., from the cat. The free-living forms had spears in the oesophagus and the male had a ventral pre-anal papilla and 2 pairs of post-anal papillae. The gubernaculum had a heavily chitinated distal finger-like process. The parasitic females, which were found some distance behind the pyloric valve in the small intestine of the cat, had short suddenly tapering tails. Eggs only were found in fresh faeces. No parasitic males were found. W.P.R.

333—Journal of the Indiana State Medical Association.

- *a. HEADLEE, W. H., KMECZA, J. M. & CABLE, R. M., 1939.—"Report of a native case of infection by the fish tapeworm, *Diphyllobothrium latum*." 32, 188-189.

* Original not available for checking or abstracting.

334—Journal of the Malaya Branch of the British Medical Association.

- a. HODGKIN, E. P., 1939.—“Transmission of *Microfilaria malayi* in Malaya.” 3 (1), 8-11.

(334a) In a general paper Hodgkin reviews the present knowledge of the distribution, vectors and possibilities of controlling filariasis in Malaya.

J.J.C.B.

335—Journal de Médecine de Bordeaux et de la Région du Sud-Ouest.

- a. PIÉCHAUD, F., 1939.—“De quelques vers intestinaux fréquents chez l'enfant.” 116 (9/10), 209-222.

336—Journal of the Oklahoma State Medical Association.

- a. SULLIVAN, E. S., 1939.—“Bilharzia. Report of a case.” 32 (5), 175-177.

337—Journal of Oriental Medicine.

- a. MIYANAGA, S., 1939.—“Studies on second intermediate host of *Clonorchis sinensis* in Mukden area.” 31 (3), 565-568. [In Japanese: English summary p. 43.]

(337a) Of 15 species of freshwater fish in the Mukden area 6 were found to be infected with cercariae of *Clonorchis sinensis*. The number of cysts found in 100 g. of fish muscle in the different species was as follows: *Carassius auratus*, 1.7; *Hemiculter clupeioides*, 6; *Leucogobio herzensteini*, 188; *Pseudogobio rivularis*, 3.3; *Pseudorasbora parva*, 134; *Rhodeus notatus*, 125.

R.T.L.

338—Journal of Parasitology.

- a. BEAVER, P. C., 1939.—“The morphology and life history of *Psilostomum ondatrae* Price, 1931 (Trematoda: Psilostomidae).” 25 (5), 383-393.
- b. WIECZOROWSKI, E., 1939.—“Parasitic lesions in turtles.” 25 (5), 395-399.
- c. BEAHM, E. H. & DOWNS, C. M., 1939.—“Differential blood picture and total cell count on normal and *Trichina* infected albino rats.” 25 (5), 405-411.
- d. PENNER, L. R., 1939.—“*Tamerlania melospizae* n. sp. (Trematoda: Eucotylidae) with notes on the genus.” 25 (5), 421-424.
- e. CUCKLER, A. C., 1939.—“*Rictularia onychomys* n. sp. (Nematoda: Thelaziidae) from the grasshopper mouse, *Onychomys leucogaster* (Weid).” 25 (5), 431-435.
- f. WALLACE, F. G. & PENNER, L. R., 1939.—“A new liver fluke of the genus *Opisthorchis*.” 25 (5), 437-440.
- g. KINGSCOTE, A. A., 1939.—“Removing air bubbles from the buccal capsules of bursate worms.” 25 (5), p. 442.
- h. LAWLER, H. J., 1939.—“Demonstration of the life history of the nematode *Syphacia obvelata* (Rudolphi, 1802).” 25 (5), p. 442.
- i. WHITLOCK, S. C., 1939.—“Snails as intermediate hosts of *Acanthocephala*.” 25 (5), p. 443.
- j. BROWN, H. W. & SHELDON, A. J., 1939.—“A note on the prevalence of intestinal helminths in Orange County, North Carolina.” 25 (5), 445-446.
- k. GOWER, W. C., 1939.—“Infectivity of *Prosthogonimus macrorchis* Macy for the common ring-necked pheasant.” 25 (5), 447-448.

- l. DOBROVOLNY, C. G., 1939.—“The life history of *Plagioporus lepomis*, a new trematode from fishes.” 25 (6), 461-470.
- m. BYRD, F. E. & ROUDABUSH, R. L., 1939.—“*Leptophyllum ovalis* n. sp., a trematode from the brown watersnake.” 25 (6), 471-473.
- n. HILL, W. C., 1939.—“The nematode *Skirjabingylus chitwoodorum* n. sp. from the skunk.” 25 (6), 475-478.
- o. STEELMAN, G. M., 1939.—“*Oochoristica whitentoni*, a new anoplocephalid cestode from a land tortoise.” 25 (6), 479-482.
- p. LONG, L. H. & WIGGINS, N. E., 1939.—“A new species of *Diorchis* (Cestoda: Hymenolepididae) from the canvasback.” 25 (6), 483-486.
- q. PEERY, H. J., 1939.—“A new unarmed tapeworm from the spotted skunk.” 25 (6), 487-490.
- r. WALLACE, F. G., 1939.—“The metacercaria of *Amphimerus elongatus* Gower (Trematoda: Opisthorchiidae).” 25 (6), 491-494.
- s. OLSEN, O. W., 1939.—“*Tatria duodecacantha*, a new species of cestode (Amabiliidae Braun, 1900) from the pied-billed grebe (*Podilymbus podiceps podiceps* (Linn.)).” 25 (6), 495-499.
- t. MIZELLE, J. D. & SEAMSTER, A., 1939.—“Studies on monogenetic trematodes. I. New species from the warmouth bass.” 25 (6), 501-507.
- u. MILLER, J. N., 1939.—“Observations on the rate of growth of the trematode *Postharmostomum laruei* McIntosh 1934.” 25 (6), 509-510.
- v. HERMS, W. B., KADNER, C. G., GALINDO V., P. & ARMSTRONG, D. F., 1939.—“Blood parasites of California birds.” 25 (6), 511-512.
- w. AMERICAN SOCIETY OF PARASITOLOGISTS, 1939.—“Program and abstracts of the 15th Annual Meeting of the American Society of Parasitologists, Columbus, Ohio, December 28-30, 1939.” 25 (6), Supplement, 61 pp.

(338a) Beayer redescribes *Cercaria thomasi* and shows it to be the larva of *Psilostomum ondatrae*, also redescribed. Cercaria and mother and daughter rediae are echinostome-like and occur in the snail, *Helisoma antrosom percarinatum*. The metacercaria develops in the lateral line canal of various fishes. Final hosts are *Pandion haliaetus carolinensis* and *Accipiter cooperi*, although chickens, ducks, pigeons and canaries have all been experimentally infected and considerable lesions produced in the proventriculus. E.M.S.

(338b) In the pancreas and other organs of *Chrysemys marginata* and *C. elegans*, Wieczorowski found eggs similar to those of *Proparorchis artericola*. Adult flukes of this species were not found in the turtles. The eggs were surrounded by nodules of the typical “foreign-body reaction” type and, from their distribution, were presumably carried in the blood stream. Larger lesions near the main pancreatic duct could be ascribed to adults and eggs of *Telorchis nematoides* and *Camallanus trispinosus* which had probably migrated from the intestine. B.G.P.

(338c) From total and differential blood counts on 20 rats, made at frequent intervals before and after infection with varying numbers of *Trichinella* larvae, Beahm & Downs found that the red-cell count remained unaffected, whereas the white-cell count was about doubled by an infection of 600 to 700 larvae. In severe infections there was a neutrophilia associated with a relative lymphopenia. Eosinophile, basophile and monocyte cells showed no change in the differential counts, the absence of any eosinophilia being noteworthy. B.G.P.

(338d) Penner describes *Tamerlania melospizae* n. sp. from the urinary tract of the Lincoln sparrow, *Melospiza lincolni lincolni*. He believes the worm to be potentially a dangerous fowl parasite. E.M.S.

(338e) A key is given to the females of the 23 named species of *Rictularia*, including *R. onychomis* n. sp. which is described from *Onychomys leucogaster* in Nebraska. R.T.L.

(338f) *Opisthorchis tonkai* n. sp. is described by Wallace & Penner from *Ondatra zibethica*. The metacercariae occur in the minnow, *Notropis deliciosus*. Infections in the cat, dog, guinea-pig and white rat were produced experimentally. This is the first American species to be placed in *Opisthorchis* (sensu stricto), all previous records having been attributed to the genus *Amphimerus*. R.T.L.

(338g) Air bubbles and ingesta can be removed from the buccal capsules of nematodes by washing them with a stream of clearing solution or other medium in which they are preserved, through a very delicate capillary tube. R.T.L.

(338h) Direct infections in laboratory mice were obtained with eggs of *Syphacia obvelata*. About one third of the females recovered 6 days later contained eggs although the controls were not infected. R.T.L.

(338i) *Acanthocephala* cysts commonly occur in *Campeloma decisum* and *Pleurocera acuta* near Lansing, Michigan, U.S.A. The larvae have been provisionally identified as those of *Neoechinorhynchus*. Hitherto snails have not been recorded as intermediaries of *Acanthocephala*. R.T.L.

(338k) The pheasant *Phasianus colchicus torquatus* is extremely refractory to experimental infection with metacercariae of *Prosthogonimus macrorchis* fed in dragonfly naiads of the genus *Tetragoneuria*. R.T.L.

(338l) The specific characters of *Plagioporus lepomis* n. sp. are defined. A key is given to the 6 freshwater species of the genus. The cercaria occurs in sporocysts in *Goniobasis livescens* and encysts in *Hyaella knickerbockeri*. Fish become infected by devouring these infected amphipods. R.T.L.

(338m) *Leptophyllum ovalis* n. sp. very closely resembles the two other species of the genus as regards anatomy but differs in habitat and host. R.T.L.

(338n) *Skrjabinylus chitwoodorum* n. sp. from the frontal sinus of *Mephitis mesomelas mesomelas* is the second species in this genus and was found in Oklahoma. R.T.L.

(338o) *Oochoristica whitentoni* n. sp. occurs in *Terrapene triunguis* in Oklahoma. It is differentiated from *O. phrynosomatis* and is the only chelonian cestode of the Cyclophyllidae hitherto described. R.T.L.

(338p) *Diorchis nyrocae* n. sp. occurs in *Nyroca valisneria* in Oklahoma. It is differentiated from *D. acuminata*. R.T.L.

(338q) Peery differentiates *Oochoristica oklahomensis* n. sp., of the skunk *Spilogale interrupta*, from the 6 previously described species in carnivores. R.T.L.

(338r) Metacercariae in the minnow *Notropis deliciosus stramineus* develop into adult *Amphimerus elongatus* in chicks and ducklings. R.T.L.

(338s) *Tatria duodecacantha* n. sp. is closely related to *T. biremis* and differs from the 4 known species in the number, shape and size of the rostellar hooks. A key is given to the 5 *Tatria* species. R.T.L.

(338t) The gyroductyloid trematodes *Urocleidus grandis* n. sp., *U. chaenobryttus* n. sp., *Actinocleidus okeechobeensis* n. sp. and *A. flagellatus* n. sp. are described from *Chaenobryttus gulosus* in Florida and Tennessee.

R.T.L.

(338v) Microfilariæ are reported from the house-finch and audubon warbler in California.

R.T.L.

(338w) Abstracts are given of the following helminthological papers presented to the American Society of Parasitologists: (i) L. Olivier "Two new species of unusual strigeid cercariae from the Douglas Lake Region, Michigan"; (ii) W. W. Cort, D. B. McMullen, L. Olivier & S. Brackett "The larval stages of the gull strigeid, *Diplostomum flexicaudum*, in juveniles and adults of *Stagnicola emarginata angulata*"; (iii) L. R. Penner "Experimental studies on *Schistosomatium douthitti* (Cort) in mouse, rat, muskrat, guinea pig and snow-shoe hare"; (iv) K. L. Hussey "Development of the excretory system in digenetic trematodes"; (v) E. W. Price "A review of the trematode superfamily Opisthorchioidea"; (vi) W. H. Leigh "Variation in a new cestode of the genus *Railletina* (*Skrjabinia*) from the prairie chicken"; (vii) H. J. Van Cleave "Systems for designating hook pattern in Acanthocephala"; (viii) H. J. Van Cleave & D. R. Lincicome "A reconsideration of the acanthocephalan family Rhadinorhynchidae"; (ix) E. L. Miller "A cercarial survey of the Lake Okoboji region of Iowa"; (x) J. D. Mizelle "Studies on monogenetic trematodes. III. Redescriptions and variations in a few known species"; (xi) J. S. Rankin, jr. "The life cycle of *Cornucopula nassicola* (Cable & Hunninen, 1938) Rankin, 1939 (Trematoda: Microphallidae)"; (xii) P. V. Gustafson "Life cycle studies on *Spinitectus gracilis* and *Rhabdochona* sp. (Nematoda: Thelaziidae)"; (xiii) D. J. Ameel "Observations on the life cycle of *Nudacotyle novicia* Barker, 1916 (Trematoda: Notocotylidae)"; (xiv) M. S. Ferguson "Development of trematode metacercariae into adult worms in sterile cultures"; (xv) P. R. Highby "The development of *Dipetalonema diacantha* and *Dirofilaria spinosa* in mosquitoes"; (xvi) W. E. Martin "The life cycle of *Monorchoides cumingiae* (Martin) (Trematoda: Monorchidae)"; (xvii) H. J. Bennett & A. G. Humes "The life history of *Stichorchis subtriquetrus* (Trematoda: Paramphistomidae)"; (xviii) E. C. Herber "Life history studies on monostomes of the genus *Notocotylus* (Trematoda)"; (xix) P. C. Beaver "The life cycle of *Euparyphium melis* (Trematoda: Echinostomidae)"; (xx) G. W. Hunter, III, W. S. Hunter & E. Kotcher "Studies on *Clinostomum*. VI. The penetration and post-cercarial development of *Clinostomum marginatum* (Rud.)"; (xxi) J. E. Larsh, jr. "Life cycle of *Corallobothrium* sp. from *Ameiurus nebulosus*"; (xxii) R. C. Rendtorff "Preliminary investigations on the life cycle of a cestode of the mouse, *Mus musculus*"; (xxiii) L. J. Thomas "Further studies on the life cycle of a cestode from the herring gull"; (xxiv) M. F. Jones, L. Jacobs & A. Hollaender "The effects of monochromatic ultraviolet radiation on eggs of *Enterobius vermicularis*"; (xxv) P. A. Cole & F. S. Brackett "Demonstration of ultraviolet microscopy"; (xxvi) T. von Brand "The glycogen distribution in the body of Acanthocephala"; (xxvii) A. E. Woodhead & C. W. McNeil "*Dioctophyme renale*, the giant kidney worm occurring in mink, from the Southern Counties of Michigan"; (xxviii) E. H. Marchant "Effect of age of rat on the size of *Trichinella* infections"; (xxix) O. F.

Gursch "Sex ratio of *Trichinella spiralis* from the digestive tract of rats"; (xxx) A. J. Levin "Recovery of *Trichinella spiralis* larvae from early stages of infection"; (xxxi) D. B. McMullen, P. F. Rezin & L. Allison "Schistosome dermatitis: distribution and epidemiology in Michigan"; (xxxii) C. G. Dobrovolsky "Seasonal variation in emergence of cotylocercous cercariae"; (xxxiii) H. W. Manter "Digenetic trematodes of fishes of the Galapagos Islands and their relationships"; (xxxiv) A. McIntosh "Diplostomum fosteri n. sp. from a Panama otter, *Lutra repanda* Goldman"; (xxxv) A. McIntosh & G. E. McIntosh "Experimental infection of European starling with *Leucochloridium carus*"; (xxxvi) R. M. Cable & A. V. Hunninen "The life history of *Spelotrema nicolli* (Trematoda: Microphallidae)"; (xxxvii) W. W. Crawford "Studies on the life history of Colorado trematodes"; (xxxviii) H. E. Wallace "Life history of *Triganodistomum mutabile* (Cort): Trematoda"; (xxxix) H. E. Wallace "Development of the excretory system in *Cercariaeum mutabile* (Cort): Trematoda"; (xl) W. S. Lundahl "Life history of *Caecicola parvulus* Marshall and Gilbert (Trematoda: Heterophyidae)"; (xli) L. D. Wall "Life history of *Spirorchis* sp. (Trematoda: Spirorchidae)"; (xlii) L. Olivier "The life history of an apharyngeal strigeid trematode from Douglas Lake, Michigan"; (xliii) G. F. Otto "The reaction between hookworm, *Ancylostoma caninum*, larvae and immune serum"; (xliv) E. A. Mauss "On the transmission of immunity to *Trichinella spiralis* from parent to offspring"; (xlv) G. L. Graham "Length of life of singly-established *Strongyloides ratti*"; (xlvi) H. J. Lawler "On the nature of age resistance to *Strongyloides ratti*"; (xlvii) J. T. Culbertson & H. M. Rose "Allergic skin reactions in human echinococcus infection with antigens from related taenias"; (xlviii) A. B. Leonard & A. E. Smith "The intestinal phase of the immunity to *Cysticercus pisiformis* in rabbits"; (xlix) R. L. Mayhew "Immunity to hookworm (*Bunostomum phlebotomum*) and nodular worm (*Oesophagostomum radiatum*) infection in calves"; (l) R. W. Wilhelmi "Serological reactions of some helminths"; (li) J. F. Mueller & F. Goldstein "Experimental human infection with *Sparganum mansonoides* (Mueller, 1935)"; (lii) E. C. Faust "A new record of human heartworm infection, from New Orleans"; (liii) M. F. Jones & L. Jacobs "Studies on the survival of eggs of *Enterobius vermicularis* under known conditions of humidity and temperature"; (liv) G. W. Hunter, III, & V. Groupé "The blood picture of white mice infected with *Trichinella spiralis*"; (lv) O. R. McCoy & V. Downing "The penetration of radioactive phosphorus into encysted *Trichinella* larvae"; (lvi) T. C. Nelson "A practical plan for the control of trichinosis"; (lvii) W. L. Threlkeld "Progress report on pasture rotation and the prevalence of the helminth parasites of sheep in southwest Virginia"; (lviii) P. D. Harwood, R. T. Habermann & L. E. Swanson "Phenothiazine as an anthelmintic"; (lix) N. F. Morehouse "Capillaria infection of the lower digestive tract of the common fowl (*Gallus domesticus*)"; (lx) P. Kouri & J. G. Basnuevo "Actual state of human hepatic distomosis in Cuba. Diagnosis and treatment"; (lxi) E. T. Delaune & R. L. Mayhew "Studies on the bovine blood picture in hookworm (*Bunostomum phlebotomum*) and nodular worm (*Oesophagostomum radiatum*) infections"; (lxii) R. T. Habermann & P. D. Harwood "Anthelmintic efficacy of unconditioned crude Phenothiazine". H. W. Stunkard's presidential address, not abstracted, was: "Life history studies and the development of parasitology".

B.G.P.

339—Journal de Radiologie et d'Électrologie.

- a. BARBILIAN, N. & REPCIUC, E., 1939.—“ Sur un cas de cysticerose généralisée diagnostiqué radiographiquement.” 23 (7), 317-319.

340—Journal of the Royal Army Medical Corps.

- a. SPROULE, J. C., 1939.—“ Superchlorination of water in the field—effect on cercariae.” 72 (6), 384-388.

(340a) The dose of water-sterilizing powder containing 25% available chlorine which is necessary to kill cercariae of *Schistosoma haematobium* and *S. mansoni* when the temperature is moderately warm is “ that indicated by the Horrocks test plus one scoopful per 100 gallons ”, but until a more perfect mixing device is fitted to army water-trucks some margin should be allowed and it is recommended that the dose should be that indicated by the Horrocks test plus two when the contact period is 30 minutes. R.T.L.

341—Journal of the South African Veterinary Medical Association.

- a. ORTLEPP, R. J., 1939.—“ Can hares and rabbits act as hosts of sheep and goat bankrupt (*Trichostrongylus* spp.) worms in South Africa?” 10 (4), 166-169.
b. WESSELS, C. C., 1939.—“ An unusual case of strongylosis.” 10 (4), 178-180.

(341a) Ortlepp records the natural occurrence of *Trichostrongylus pfeisteri* in the duodenum of two Cape Grey Hares and gives a description of the material. Compared with leRoux's description of this species the author's male specimens were smaller and the spicules were slightly longer but not of specific significance. The experimental infection of rabbits with *Trichostrongylus colubriformis* by feeding larvae raised from sheep faeces is also recorded and larvae from the resulting infection caused infection to be set up in a lamb; these experiments were carried out to show that the rabbit may act as reservoir host for some sheep nematodes and that this might be important from the point of view of control. J.W.G.L.

(341b) Wessels records a clinical case of strongylosis in a 9-months-old thoroughbred filly where death was due to haemorrhage resulting from damage to an artery of the xyphoid region. Large numbers of larvae of *Strongylus vulgaris* and *S. edentatus* were found in the anterior mesenteric and ileo-caeco-colic arteries and in cysts in the parietal and visceral peritoneum. J.W.G.L.

342—Journal of Tropical Medicine and Hygiene.

- a. CAWSTON, F. G., 1939.—“ The river bank as an environment for larval parasites.” 42 (22), 341-342.
b. CLELAND, J. B., 1939.—“ Medical names in Australian zoological nomenclature.” 42 (22), 343-348.
c. HOFF, H. & SHABY, J. A., 1939.—“ Nervous complications in ankylostomiasis.” 42 (23), 360-362.

343—Journal of Urology.

- a. CHEN, P. T. & GRAY, J., 1939.—“ Some sequelae of filariasis of urological interest.” 42 (1), 68-74.

344—Journal of the Washington Academy of Sciences.

- a. KRULL, W. H., 1939.—“Observations on the distribution and ecology of the oribatid mites.” 29 (12), 519-528.

(344a) In view of Stunkard's recent discovery that oribatid mites are intermediate hosts of *Moniezia expansa*, Krull has made a preliminary investigation of the conditions under which these mites occur and the climatic and other factors which influence their abundance and distribution. He describes methods of collection of material and of culturing the mites under artificial conditions. Under natural conditions oribatid mites are most abundant on spring grass three inches in length and after the ground has been saturated with rain. Their vertical migration on grass was influenced by wind, light, water and food. Of the numerous mites dissected by Krull only *Galumna emarginata* contained cysticercoids of *Moniezia expansa*.
R.T.L.

345—Kitasato Archives of Experimental Medicine.

- a. KATO, T., 1939.—“Method of collecting cercariae of *Schistosomum japonicum* and report of experiment in inoculation.” 16 (4), 340-342.

(345a) The cercariae of *Schistosoma japonicum* rise to the top of the water and float with their ventral sides up and their tails down. The floating is apparently due to mucus. By using a horse-hair loop 1 cm. in diameter these floating cercariae can be fished out and transferred to a slide or watch glass. The snail intermediaries climb readily out of water. This can be prevented by placing a net of horse-hair or gauze or perforated cellophane over the top of the dish in which the snails are living and this is then placed in a larger dish so that the water covers the first dish by about half a centimetre. Rabbits were infected with cercariae caught by this method. The cercariae were placed on the shaved skin of the abdomen and left wet for more than 20 minutes. About 35% of the cercariae used became adult. R.T.L.

346—Klinische Monatsblätter für Augenheilkunde und für Augenärztliche Fortbildung.

- a. STROSCHEIN, E., 1939.—“*Filaria loa* am Auge.” 102, 111-112.

347—Laval Médical.

- *a. CARON, S., 1939.—“*Taenia inermis* chez un enfant de 5 ans.” 4, 97-106.

348—Lederle Veterinary Bulletin.

- *a. STUBBS, E. L., 1939.—“Canine filariasis with particular reference to its diagnosis.” 8, 111-115.

349—Lingnan Science Journal.

- a. CHIN, T. G., 1939.—“Notes on the definitive and intermediate hosts of *Paragonimus* from Changting, Fukien.” 18 (4), 525-528.

* Original not available for checking or abstracting.

(349a) Chin has found *Paragonimus* in *Felis catus*, *F. pardus* and *Vulpes vulpes* in the vicinity of Changting. Its eggs were obtained from faeces of a dog and of a pig. Crabs are not ordinarily eaten by man in this region. *Melania ebenina* and *M. libertina* were present in the streams but none were found infected. All the specimens of the crab *Potamon denticulatus* examined from the stream in Wankon town were infected with *Paragonimus* cysts.

R.T.L.

350—Lotta Contro la Tubercolosi.

- a. D'AMBROSIO, R., 1939.—“Evoluzione transtoracica di cisti da echinococco polmonare.” 10 (2), 163-171.

351—Lyon Médical.

- a. BONNET, M. L., MORENAS & CONTAMIN, 1939.—“Cysticerose musculaire et probablement cérébrale: diagnostic radiologique et humoral.” 163 (8), 205-209.
b. GARIN, C. & FAYOUMI, 1939.—“Les localisations appendiculaires des bilharzioses vésicale et rectale.” 163 (25), 705-707.

352—Maandschrift voor Kindergeneeskunde.

- a. DEKKER-JONKER, A., 1939.—“Een geval van longechinococcus.” 8, 231-238.

353—Maanedsskrift for Dyrlæger.

- a. BANG, O., 1939.—“Hageorminvasioner hos Hunde.” 51 (18), 465-476.

(353a) Bang gives a general account of hookworm disease in dogs, especially that due to *Uncinaria stenocephala* which, as he points out, is the commoner species in central and northern Europe whilst *Ancylostoma caninum* is commoner in southern Europe. He deals briefly with development of the parasite, pathogenesis, immunity, symptoms, prophylaxis and treatment, adding some reports of illustrative cases.

B.G.P.

354—Médecine. Paris.

- a. EUZIÈRE, J. & HARANT, H., 1939.—“Accidents nerveux imputables à *Hymenolepis nana*.” 20 (2), 133-138.

355—Mémoires de l'Institut Royal Colonial Belge. Section des Sciences Naturelles et Médicales.

- a. BERGHE, L. VAN DEN, 1939.—“Les schistosomes et les schistosomoses au Congo belge et dans les territoires du Ruanda-Urundi.” 8, [Reprint 152 pp.]

(355a) Six different schistosomes are known to be present in the Belgian Congo, viz., in man, *S. mansoni*, *S. haematobium* and *S. haematobium* var. *intercalatum*; in Bovidae, *S. bovis* and *S. bovis* var. *mattheei*; and in antilopes, *S. margrebowiei* and *S. bovis*. In that region the intermediate host of *S. mansoni* is *Planorbis adowensis* while *Physopsis africana* transmits *S. haematobium* var. *intercalatum* and probably *S. haematobium*. The

monograph contains many observations on the ecology of the molluscan fauna and discusses the morphology of the adult forms and their systematic relationship; particularly is attention given to the problems of the relation of *S. haematobium*, *S. bovis* and *S. intercalatum*. *S. bovis* is reported from 2 antelopes of the species *Limnotragus spekei*, and *S. margrebowiei* from *Onotragus (Cobus) lechwe*. There is a useful list of 134 mammals and birds in which no schistosome worms were found at post-mortem. Berghe's experiences with emetine, tartar emetine, Fouadin and Stibilax leaves him less optimistic than other observers owing to the considerable percentages of relapses which occurred. Schistosomiasis is, in Berghe's opinion, likely to become of increasing gravity with the economic development of the Belgian Congo. Prevention of infection of the water is the most likely procedure to be effective and the problem of control is essentially one of education.

R.T.L.

356—Mississippi Doctor.

- *a. RICKS, H. C. & NICKEL, H., 1939.—“Recent advances in laboratory diagnosis of intestinal parasites and their treatment.” 17, 8-13.

357—Monatsschrift für Kinderheilkunde.

- a. BRÜNING, H., 1939.—“Eingeweidewürmer bei Kindern.” 77 (3/4), 295-299.

358—Monde Médical.

- a. DUTREY, M. & VELLUZ, J., 1939.—“Hémorragie méningée d'origine vermineuse.” 49 (938), 668-670.

359—Mycologia.

- a. DRECHSLER, C., 1939.—“Five new Zoopogaceae destructive to rhizopods and nematodes.” 31 (4), 388-415.

(359a) Drechsler describes and figures 5 new fungi, 4 of which feed upon rhizopod protozoa whilst the 5th, obtained by inoculating a maize meal agar plate with leaf mould, was found to destroy a species of nematode belonging to the genus *Bunonema*. This fungus is named *Euryancale sacciospora* n. g., n. sp.

T.G.

360—New England Journal of Medicine.

- a. BOTSFORD, T. W., HUDSON, jr., H. W. & CHAMBERLAIN, J. W., 1939.—“Pinworms and appendicitis.” 221 (24), 933-936.

361—New Zealand Journal of Agriculture.

- a. BENNETT, E. W., 1939.—“Hydatids campaign. Correct method of administering arecoline.” 59 (3), 202-206.
 b. ANON, 1939.—“Red worms in horses.” 59 (3), 233-234.
 c. TAYLOR, E. L., 1939.—“Parasitic disease of farm animals. Practical problems which confront the farmer in avoiding losses.” 59 (6), 485-491.

* Original not available for checking or abstracting.

(361a) In New Zealand fully half of the sheep and cattle have hydatids. Arecoline is the only remedy which has proved safe and reliable in the removal of *Taenia echinococcus* from dogs and every dog owner there is supplied free with arecoline tablets on the payment of the annual dog licence. One quarter of a grain is given to dogs of the terrier type and $\frac{1}{2}$ grain to collies and other large, strong breeds. The tablet is dissolved in water before use. A simple technique for administering arecoline is illustrated by a series of photographs. J.W.G.L.

(361c) [For abstract of this paper see Helm. Abs., Vol. VII, No. 327b.]

362—New Zealand Medical Journal.

- a. BARNETT, L., 1939.—“The incidence and prevention of hydatid disease in New Zealand.” 38 (206), 256-262.

(362a) Presenting statistics on the incidence of hydatid in man in New Zealand in 1938, Barnett points out that they are only a slight improvement on those for 1937. There were 144 cases, with 16 deaths. Probably more than half the 31 million sheep and $4\frac{1}{2}$ million cattle are infested. It is shown that propaganda continues actively, and in 1939 the Government distributed a year's supply of $\frac{1}{4}$ -grain tablets of arecolin hydrobromide to each dog-owner; few cases of toxic effects have so far arisen. Nemural (Bayer) is also being investigated as an alternative taeniafuge. B.G.P.

363—North American Veterinarian.

- a. ANON, 1939.—“Hydrogen peroxide as an anthelmintic.” 20 (11), 26-27.

364—Novi Khirurgicheski Arkhiv.

- *a. TIKHODEEV, S. M., 1939.—[Roentgen diagnosis of echinococcosis of spleen.] 43, 76-77.

365—Novitates Zoologicae.

- a. ROTHSCCHILD, M., 1939.—“A note on the life cycle of *Cryptocotyle lingua* (Creplin) 1825 (Trematoda).” 41, 178-180.

(365a) The life-history of *Cryptocotyle lingua* has been repeated experimentally. Cercariae from *Littorina littorea* attack almost any marine fish in the laboratory including several in-shore forms at Plymouth, e.g., wrasse, blennies and butterfish. The Spotted Goby is immediately killed by large invasions. After infected fish were fed to gulls deprived of artificial vitamins usually added to their food, adult flukes were obtained. R.T.L.

366—Nuova Veterinaria.

- a. MACCHIONI, I., 1939.—“Le ghiandole emolinfatiche nella distomatosi epatica degli ovini.” 18 (1), 8-16.

(366a) Macchioni describes the “haemolymphatic” glands of normal and flukey sheep as found by him in many thousands of carcasses in the

* Original not available for checking or abstracting.

abattoir. Composed of spleen-like tissues, and normally varying in size from a millet-seed to a wheat grain, they are numerous wherever lymphatic glands are found: along the trachea, in perivascular aortic tissues, subcutaneously, etc. In flukey sheep these glands are much more numerous and are considerably enlarged. After a full and illustrated description of their histology, the author concludes that their normal function is erythrolytic and (to a less degree) leucopoietic. In the presence of severe distomiasis not only are these functions increased but in addition there is considerable erythropoiesis.

B.G.P.

367—Nuovo Ercolani.

- a. CARTA, A., 1939.—“Particolari alterazioni epatiche del cane da uova di parassiti del genere *Capillaria*.” 44 (11), 363-373.
- b. CARLO, R., 1939.—“Prima nota sugli elminti della regione dello Scioa.” 44 (11), 374-381.

(367a) Carta describes a liver of a dog containing lesions which he associates with the presence of eggs of *Capillaria* sp. The liver was enlarged, congested and slightly cirrhotic, and contained small nodules. These consisted of a central necrosed area in which the eggs were to be found in large numbers. There were some lymphocytes and eosinophiles. The whole was cut off from healthy liver tissue by a fibrous tissue capsule: the tissue in immediate contact with this was somewhat inflamed. Similar lesions have been previously described by Perroncito who however associated them with coccidial infections.

P.A.C.

(367b) From the Shoa district of Abyssinia, Carlo briefly lists the helminth species found in domesticated equines, ruminants, poultry, etc. In the following cases a description is given: *Gyalocephalus equi* from an imported Italian mule, a single female *Cylindropharynx* from an Abyssinian mule (normally a parasite of zebra), a *Dicrocoelium* from an ox, and two trichostrongylid species from sheep and goats.

B.G.P.

368—Onderstepoort Journal of Veterinary Science and Animal Industry.

- a. MALAN, J. R., 1939.—“Some helminths of South African lizards.” 12 (1), 21-74.
- b. ORTLEPP, R. J., 1939.—“South African helminths, Part VI. Some helminths, chiefly from rodents.” 12 (1), 75-101.

(368a) The helminths of South African lizards collected by Malan show a high degree of host-specificity. Among the species recorded the following are new: *Paradistomum zonuri* n. sp. and *Thubunaea impar* n. sp. from *Zonurus cordylus*; *Oochoristica africana* n. sp. from *Agama hispida*; *Pharyngodon mabuiensis* n. sp. from *Mabuya trivittata*; *Thelandros rotundus* n. sp. from *Agama atra* and *Pseudocordylus microlepidotus*. Several generic diagnoses are discussed and emended. Notes are given on host-specificity, infection percentages and possible life-histories.

R.T.I.

(368b) Of 10 new species of helminths described 7 are from rodents, 2 from antelopes and 1 from the rock rabbit, viz., *Paralibyostrongylus vondwei* gen. and sp. nov. from the cane rat; *Longistrongylus schrenki* sp. nov. from the waterbuck; *Paracooperia raphiceri* sp. nov. from the steenbuck;

Longistriata (L.) *capensis* sp. nov., *Heligmonoides stellenboschius* sp. nov. and *Heligmospiroides spira* gen. and sp. nov. from mice; *Libyostrongylus bathyergi* sp. nov., *Longistriata* (L.) *bathyergi* sp. nov. and *Heterakis macrospiculum* sp. nov. from the dune mole; and *Theileriana breviesophagus* sp. nov. from the rock rabbit. R.T.L.

369—Pamiętnik Państwowego Instytutu Naukowego Gospodarstwa Wiejskiego w Puławach. Wydział Weterynaryjny.
[Supplement to Wiadomości Weterynaryjnych.]

- a. WADOWSKI, S., 1939.—“*Parafasciolopsis fasciolaemorpha* Ejsm. 1932 u sarn.” (1938), No. 2, 91-95. [French summary p. 95.]
- b. OBITZ, K. & WADOWSKI, S., 1939.—“Przyczynki do zwalczania pasożytów zwierząt domowych w praktyce.” (1938), No. 2, 96-102. [English summary p. 102.]
- c. WADOWSKI, S., 1939.—“Notatki parazytologiczne.” (1938), No. 2, 103-104. [French summary p. 104.]
- d. WADOWSKI, S., 1939.—“Niektóre pasożyty jelit drobiu.” (1938), No. 2, 105-139. [French summary p. 139.]

(369a) Wadowski has found 14 specimens of *Parafasciolopsis fasciolaemorpha* Ejsmont, 1932 in a roe-deer from Pinczow, a region where the elk (hitherto the only known host) is no longer found. B.G.P.

(369b) Obitz & Wadowski have treated 3,000 flukey sheep by subcutaneous injections of carbon tetrachloride and paraffin. The average time of treatment was one minute per sheep and the cost one dollar per 100 sheep. 1,600 sheep were cured and there were only 5 accidents. B.G.P.

(369c) Wadowski contributes 2 parasitological notes: (i) Examination of the bile ducts of 28 roe-deer revealed *Dicrocoelium dendriticum* in 59% and *Fasciola hepatica* in 22%. (ii) Heavy infections after feeding rabbits with *Trichinella* larvae in alcohol contradict the view that smoked meat of unknown origin can be eaten with safety if accompanied with plenty of alcohol. B.G.P.

(369d) Wadowski has examined over 400 domestic birds for helminth parasites, and has recovered 22 different species. There were 3 trematodes, 11 cestodes, 7 nematodes and a single acanthocephalan. The presence of *Brachylaemus commutatus* is exceptional, being usually associated with warmer climates. A fair number of the birds contained no helminths—41% of the chickens, 31% of the ducks, about half the turkeys and 76% of the pigeons. P.A.C.

370—Parasitology.

- a. DAVIES, T. I., 1939.—“Four species of *Hymenolepis* Weinl. parasitic in the oystercatcher, *Haematopus ostralegus* Linn.” 31 (4), 401-412.
- b. VAN CLEAVE, H. J. & LINCICOME, D. R., 1939.—“On a new genus and species of Rhadinorhynchidae (Acanthocephala).” 31 (4), 413-416.
- c. REES, G., 1939.—“Studies on the germ cell cycle of the digenetic trematode *Parorchis acanthus* Nicoll. Part I. Anatomy of the genitalia and gametogenesis in the adult.” 31 (4), 417-433.
- d. CABALLERO Y C., E., 1939.—“A new species of *Camallanus* from the stomach of *Kinosternon hirtipes*. IV.” 31 (4), 448-450.
- e. REES, G., 1939.—“*Cercaria strigata* Lebour from *Cardium edule* and *Tellina tenuis*.” 31 (4), 458-463.
- f. TAYLOR, E. L., 1939.—“Technique for the estimation of pasture infestation by strongyloid larvae.” 31 (4), 473-478.

(370a) Two out of four species of *Hymenolepis* found in the oyster catcher, *Haematopus ostralegus*, are new. These are described and named *H. lauriei* n. sp. and *H. cambrensis* n. sp. R.T.L.

(370b) *Illiosentis furcatus* n. g., n. sp. is described from *Menticirrhus americanus*. It is possible that this has been diagnosed previously by Linton (1905) as belonging to the species *Echinorhynchus pristis* and by Meyer (1932-3) as *Rhadinorhynchus pristis*. The new genus differs from all other genera of Rhadinorhynchidae except *Telosentis* in possessing cuticular spines on the genital extremity and is readily distinguished from *Tegorhynchus* by the greatly enlarged ventral hooks in the basal circle of the proboscis hooks. R.T.L.

(370c) The male and female genitalia of *Parorchis acanthus* are described in detail. The chromosome number in this species is 22. This is reduced to 11 in both male and female cells at the first meiotic division. *P. avitus* is considered to be a synonym of *P. acanthus*. R.T.L.

(370d) *Camallanus parvus* n. sp. is described from the tortoise *Kinosternon* (*Chinosternum*) *hirtipes* in Mexico. R.T.L.

(370e) *Cercaria strigata* is the larval form of a species of *Gymnophallus* from a bird, most likely *G. deliciosus* from *Larus* spp. Several other larval trematodes found in molluscs of the Dovey Estuary are recorded. The ciliated sporocyst described by Nicoll from *Cardium edule* at St. Andrews is the rhabdocoele *Scrobicularia plana*. R.T.L.

(370f) A modification of the Baermann technique is proposed for the separation of nematode larvae from large sized samples of herbage and debris. It does not separate parasitic larvae from free-living nematodes. This has to be undertaken microscopically. A method of collecting samples from a pasture area is described. Pinches of grass are plucked periodically by two collectors in traversing a field. The whole is thoroughly mixed and weighed and each collector's takings are divided into equal portions. Each of these 4 portions is added to a large bucket of water and 1,000 trichostrongylid larvae are then added to one only and stirred round to obtain even mixing with the herbage. After standing for two hours the grass is removed by hand, squeezed or drained of water which is allowed to run into the bucket. A coarse mesh screen is used to remove any separate pieces of grass. The whole of the washings are then passed through a fine screen of 60 linear meshes to the inch into another bucket and allowed to stand overnight. The water is then siphoned off. The sediment is poured into a round-bottomed pint measuring glass and allowed to settle for 6 hours. The supernatant water is siphoned off and the sediment is quickly pipetted on to Whatman No. 1 filter paper 17 cm. in diameter standing on several thicknesses of blotting paper so that the sediment is evenly spread. The filter paper is then turned over with the sediment down into a large Baermann's apparatus containing a wire screen 19 cm. in diameter. The water is allowed to rise at least one quarter of an inch above the screen, so that the sediment is not rubbed on the surface of the wire gauze. About half of the larvae are found in the bottom of the funnel in 24 hours and almost all by the end of a week. The larvae are counted if few, but if present in thousands the number per pound of original herbage is calculated by a formula. This

technique requires 8 to 9 days if the maximum number of larvae is to be recovered. With this technique Taylor estimates that an average sheep pasture carries about 200 infective larvae per pound of herbage towards the end of the summer, a heavily infected pasture carries up to 500 and when sheep with acute parasitic gastritis are grazing the larvae may reach 1,000 to 2,000 per pound of herbage. R.T.L.

371—Paris Médical.

- a. LAVIER, G., BARIÉTY, M. & CAROLI, J., 1939.—“Distomatose hépatique et syndrome de Loeffler.” 29 (20), 434-439.

372—Philippine Journal of Animal Industry.

- a. MANGONON, P. S., 1939.—“A case of severe taeniasis and haemonchosis in a young goat.” 6 (1), 77-79.

373—Philippine Journal of Science.

- a. VAZQUEZ-COLET, A. & AFRICA, C. M., 1939.—“Determination of the piscine intermediate hosts of Philippine heterophyid trematodes by feeding experiments. Progress report.” 70 (2), 201-214.

(373a) Philippine fishes are frequent carriers of trematode, and especially heterophyid, metacercariae. Tables are given of the results of feeding experiments on various definitive hosts with infected fish. Ten more fishes are shown to harbour heterophyid trematodes. To the 9 species of experimentally determined heterophyids, 4 more are added, viz., *Haplorchis pumilio*, *H. taichui*, *H. sisoni* and *Stamnosoma formosanum*. *Echinochasmus novalichesensis* and *Neodiplostomum* sp. inq. have been obtained experimentally from piscine hosts. R.T.L.

374—Phytopathology.

- a. YOUNG, P. A., 1939.—“Tomato wilt resistance and its decrease by *Heterodera marioni*.” 29 (10), 871-879.
b. MILES, L. E., 1939.—“Some tests of varietal susceptibility to a combination of root-knot nematode and cotton wilt.” 29 (11), 974-978.

(374a) Young records data from experiments with large numbers of tomato varieties on their resistance to wilt caused by *Fusarium lycopersici*. In the course of the experiments he found evidence that in many varieties the presence of *Heterodera marioni* decreases resistance to wilt. M.T.F.

(374b) Miles tested 17 varieties of upland cottons and 14 foreign, exotic and hybrid varieties and strains for resistance to *Fusarium vasinfectum* and *Heterodera marioni* together. The plants were grown in replicated plots and examined at harvest for root-knot and wilt. The upland varieties fell into 3 groups, resistant, intermediate and susceptible. For each group the average resistance to the 2 diseases varied in the same direction, and the average yield of cotton decreased with increasing disease. Of the exotic varieties 8 showed greater wilt resistance than the more resistant upland varieties, and all but one were more susceptible to root-knot. M.T.F.

375—Plant Disease Reporter.

- a. NEWHALL, A. G., CLEMENT, R. L., SMITH, I. D. & CHITWOOD, B. G., 1939.—“A survey of the occurrence of the bulb or stem nematode on onions in the State of New York.” 23 (17), 291-293.

(375a) Newhall et al. present data on the distribution of the stem eelworm, *Ditylenchus dipsaci*, attacking onions in the chief onion producing areas of 4 counties in New York State. They indicate that sulphur is valueless as an eradicator of the eelworm but that chloropicrin produced good results at the rate of 348 pounds per acre, applied in 4 c.c. doses in holes 15 inches apart and 8 inches deep. T.G.

376—Policlinico (Sezione Pratica).

- a. TIMPANO, P., 1939.—“L'anchilostomiasi. (Rilievi clinici e di laboratorio).” 46 (33), 1455-1461.
 b. ORLANDINI, P., 1939.—“Sopra un caso di bilharziosi intestinale trovato nella regione del basso-piano Etiopico al confine col Sudan Anglo-Egiziano.” 46 (36), 1587-1593.
 c. RUBEGNI, R., 1939.—“Sulla possibilità di un viraggio della reazione di Casoni dopo intradermoreazioni ripetute.” 46 (43), 1859-1867.

(376b) From a region of Abyssinia, close to the Sudan frontier and medically unexplored, Orlandini reports an infestation of *Schistosoma mansoni* in a native. He then gives some elementary information about schistosomiasis in general. Snails of the genus *Planorbis* were plentiful in the region. B.G.P.

(376c) Rubegni notices that the use of several intradermal injections of hydatid antigen may induce the development of a positive Casoni reaction in individuals who are not carriers of hydatid cyst. Some remained negative after repeated intradermal tests, but 45% gave slightly positive Casoni reactions after 2 or more sensitizing infections and 14% of these were so marked that, had the previous history not been known, they would have been diagnosed as positive carriers of hydatid cyst. P.A.C.

377—Presse Médicale.

- a. DÉJOU, L., 1939.—“Les arthrites microfilariennes de l'onchocercose africaine (*Onchocerca volvulus*).” 47 (49), 983-984.

(377a) Déjou records two more cases of arthritis of microfilarial origin, from the Ivory Coast. A method is described of diagnosing the microfilariae in the articular fluid. They are sheathless, 250 to 300 μ long and 7 μ in width. From each case a cyst of *Onchocerca volvulus* was removed surgically. J.J.C.B.

378—Proceedings of the Indian Academy of Sciences. Section B.

- a. LAL, M. B., 1939.—“Studies in helminthology. Trematode parasites of birds.” 10 (2), 111-200.
 b. AKHTAR, S. A., 1939.—“On some nematode parasites from Afghanistan.” 10 (5), 287-291.

(378a) Lal describes briefly a large number of trematodes collected from birds in India and incorporates notes on species previously recorded by various observers. Critical remarks are made on some of the families, subfamilies and genera into which these fall. Two new species are added to the genus *Opisthorchis*, Morgan's definition of which is emended. *Opisthorchis giddhis* n. sp. came from *Sarcogyps calvus* and *O. cheelis* n. sp. from *Milvus migrans*. A new genus *Neoalaria* is made for *N. thaparia* n. g., n. sp. from *Sarcogyps calvus*. It is near to *Alaria* and *Proalaria*, but differs from both in having peculiar disposition of the vitellaria, dumb-bell shaped testes, a bursa without sucker or papilla and a peculiar body shape. Other new species are *Echinostoma chasma* n. sp. from *Querquedula ciria*; *Echinochasmus megavitellus* n. sp. from *Ardeola grayi*; *E. reniovarus* n. sp. from *Corvus splendens*; *Stephanoprora fusca* n. sp. from *Totanus fuscus*; *Neodiplostomum dilacaecum* n. sp. from *Athene brama*; and *Pharyngostomum bagulum* n. sp. from *Ardea cinerea rectirostris*. Attention is drawn to certain peculiar cases of geographical distribution due to avian migrations.

R.T.L.

(378b) Seven nematodes are recorded from Afghanistan: *Strongylus equinus* from the horse, *Passalurus ambiguus* and *Dermatoxys* sp. in the rabbit, *Enterobius vermicularis* in a child, *Syphaciella indica* in *Pterocles* sp. (local name Burnaqara), *Spirocerca lupi* in the aorta of a domestic cat in Kabul, and *Thubunaea baylisi* n. sp. from *Agama* sp. This new species is distinguished by its lips which are armed internally with only 3 blunt forward directed teeth.

R.T.L.

379—Proceedings of the Royal Society of Medicine.

- a. LEVY, A. H., 1939.—“A case of bilateral keratitis and cyclitis due to filaria (*Onchocerca volvulus*) infection in a European from Kenya.” 32 (12), 1620-1624.

380—Proceedings of the Society for Experimental Biology and Medicine.

- a. MILLER, M. J., 1939.—“The egg-count index of *Trichocephalus vulpis* infections in dogs.” 42 (1), 301-303.
- b. MILLER, M. J., 1939.—“Studies on embryonation and hatching of the eggs of the dog whipworm, *Trichocephalus vulpis*.” 42 (1), 303-305.

(380a) Miller reports that the average daily egg-output of *Trichuris vulpis*, the whipworm of dogs, is 2,035 eggs, whilst each 1,350 eggs in the faeces represents one worm in the host. These results, if comparison is permitted with the results of previous workers on *T. trichiura*, show that Leuckart's and Moosbrugger's calculations are closer to the true ones than those of Manalang and Correa & Mellone.

M.R.Y.

(380b) Miller states that embryonation and hatching of the eggs of *Trichuris vulpis* brought about by the stimulation of mechanical agitation by centrifuging and by immersion in brine are not actually comparable to eggs developing in nature. The salt content of the soil, however, may affect the epidemiology of whipworm disease. From 25% to 50% of *T. vulpis* eggs can be hatched by immersion in artificial gastric juice for 20

hours and artificial pancreatic juice for 2 hours. It will be seen that the length of time in the stomach may influence hatching and thus the intensity of infection in the host.

M.R.Y.

381—Profilassi.

- a. CARTA, A., 1939.—“Il *Tetrathyridium bailleti* può riprodursi?” 12 (2), 71-73.

(381a) Carta describes and discusses an experiment, bearing upon the life cycle of *Mesocostoides lineatus*, in which 10 *Tetrathyridium bailleti* (from the abdominal cavity of a dog) were introduced by laparotomy into the abdominal cavity of each of 3 young dogs. In all cases the cavity and contained viscera were inspected at operation and found free from tetrathyridia. The dogs were given cooked food and kept under controlled conditions. After respectively 3, 4 and 5 months the dogs were killed, and 23, 31, and 29 tetrathyridia were recovered—some larger and some smaller than those originally introduced. In one case, 8 small acephalous vesicles were also found and it is thought that these may be early stages in the asexual multiplication of tetrathyridia. Some of the latter were marked by deep transverse incisions suggesting fission like that of spargana. Carta considers that *Mesocostoides* should be separated from both the Cyclophyllidea and Pseudophyllidea.

B.G.P.

382—Progrès Médical.

- a. TERRIEN, F., 1939.—“Les kystes parasitaires de l'oeil et de l'orbite.” 67, 553-554, 559-560.

383—Public Health Reports. . Washington.

- a. WRIGHT, W. H., BRADY, F. J. & BOZICEVICH, J., 1939.—“Studies on oxyuriasis. XIV. Controlled tests with various methods of therapy.” 54 (45), 2005-2016.

(383a) Wright, Brady & Bozicevich give the results of simultaneous treatment of pinworm-infested families. Diagnosis was made and the efficacy of the treatments was checked by use of the NIH swab. Attempts were made to obtain 7 post-treatment swabs. Twenty cases treated with santonin in a single dose daily over a period of 10 days gave a result of less than 50% efficacy. Twenty-seven cases treated with a varying number of enemas consisting of hexylresorcinol in a dilution of 1: 2,000 in water resulted in 18 negative on post-treatment swab examination, i.e., 66% efficacy. Hexylresorcinol administered orally in the form of Caprocol pills was not effective even when supplemented with an enema and repeated weekly 3 times. Anal ointments are of little or no aid in controlling pinworm infections, but with infants and young children non-medicated enemas have brought about a reduction in the number of pinworm-positives.

M.R.Y.

384—Puerto Rico Journal of Public Health and Tropical Medicine.

- a. MAINZER, F., 1939.—“On a latent pulmonary disease revealed by X-ray in intestinal bilharziasis (*Schistosoma mansoni*).” 15 (1), 111-123. [Also in Spanish pp. 124-135.]

385—Queensland Agricultural Journal.

- a. ANON., 1939.—“Worms in sheep.” 52 (2), p. 217.
- b. ROBERTS, F. H. S., 1939.—“The parasitic worms of sheep.” 52 (3), 254-279.
- c. ANON., 1939.—“Lung worms in cattle and sheep.” 52 (3), p. 341.

(385b) In Queensland worm diseases of sheep are of prime importance as diseases caused by micro-organisms appear to be comparatively uncommon. Worm infestations are serious in those districts where the annual rainfall exceeds 20 inches. An illustrated popular account is given of the helminths of sheep in Queensland, with advice on methods of collection, diagnosis, treatment and control. R.T.L.

386—Radiologia Medica.

- a. BARBIERI, A., 1939.—“L'indagine radiologica nell'ascaridiasi.” 26 (3), 197-225; (6), 475-506.

387—Rassegna Internazionale di Clinica e Terapia.

- a. JACOPINO, L., 1939.—“L'anchilostomiasi malattia rurale.” 20 (7), 290-298.

388—Records of the Indian Museum.

- a. GOGATE, B. S., 1939.—“On a new species of the genus *Euparadistomum* Tubangui (Trematoda) from a bat, *Cerivoula picta* (Pallas) from Burma.” 41 (1), 17-19.
- b. MAPLESTONE, P. A. & RAO, S. S., 1939.—“The tail of the male *Wuchereria bancrofti*.” 41 (1), 35-36.
- c. GOGATE, B. S., 1939.—“On a new trematode *Palitrema macrorchis* gen. et sp. nov. from Rangoon lizards.” 41 (1), 57-60.
- d. JOHRI, L. N., 1939.—“On two new species of *Diorchis* (Cestoda) from the Indian Columbiformes.” 41 (2), 121-129.
- e. SUBRAMANIAM, M. K., 1939.—“Studies on cestode parasites of fishes. I. *Biporophyllaeus madrasensis* gen. et sp. nov., with a note on its systematic position.” 41 (2), 131-149.
- f. MAPLESTONE, P. A., 1939.—“A new species of *Uncinaria* Frölich, 1789 (Nematoda), with a note on *U. stenocephala* (Railliet, 1884).” 41 (3), 219-222.

(388a) *Euparadistomum cerivoulae* n. sp. is differentiated from *E. varani* and the diagnosis of *Dicrocoeliinae* has been emended by Gogate. R.T.L.

(388b) A specimen of male *Wuchereria bancrofti* has been examined. The spicules and 5 pairs of pre-anal and 4 pairs of postanal papillae are illustrated. R.T.L.

(388c) A new subfamily *Palitreminae* is added to the *Lecithodendriidae* for *Palitrema macrorchis* n. g., n. sp., a parasite of lizards in Rangoon. R.T.L.

(388d) *Diorchis alvedea* n. sp. and *D. chalcophapsi* n. sp. are described and the different characters of the 20 species of the genus *Diorchis* are tabulated. R.T.L.

(388e) A new monozootic cestode *Biporophyllaeus madrasensis* n. g., n. sp. is recorded from the dogfish *Chiloscyllium griseum*. The anatomy and histology is treated in great detail, and it is placed in a new family, *Biporophyllaeidae*, in the new order *Biporophyllaeida*. The *Caryophyllaeidea* is treated as a separate order of the *Cestodaria* and is redefined. R.T.L.

(388f) *Uncinaria felidis* n. sp. is described from a leopard cat *Prionailurus bengalensis* in which *Ancylostoma braziliense* also occurred. *U. stenocephala* is recorded from *Mellivora indica*. Hitherto it has only been found in India in the dog.

R.T.L.

389—Review of Gastroenterology.

- a. PRICE, A. S., 1939.—“Schistosomiasis (*S. mansoni*). A report of seven imported cases.” 6 (2), 115-122.

390—Revista Argentina de Urología.

- *a. COMOTTO, C. & BERRI, H. D., 1939.—“Sobre un caso de quiste hidatídico retrovesical.” 8, 95-100.

391—Revista de la Asociación Médica Argentina.

- *a. LAMBRE, P. F., 1939.—“Nueva comprobación radiológica de cisticercosis.” 53, 288-290.

392—Revista de Cirugía de Buenos Aires.

- *a. JORGE, J. M. & GOÑI MORENO, I., 1939.—“Hidatidosis secundaria broncogenética.” 18, 1-19.

393—Revista Médica Latino-Americana.

- a. FISCHNALER, H. A., 1939.—“La *Onchocerca caecutiens* y su acción patógena.” 24 (281), 479-485.

(393a) Fischnaler indicates the distribution of *Onchocerca caecutiens* in Central America and describes in detail the cutaneous lesions known in Guatemala as “erisipela de la costa”, and the ocular complications associated with this parasite.

J.J.C.B.

394—Revista Medica de Pernambuco.

- *a. AREIAS, A. & FIGUEIREDO, A., 1939.—“Do *Metastrongylus elongatus* (Dujardin, 1845).” 9, 69-74.

395—Revista de Medicina Tropical y Parasitología, Bacteriología, Clínica y Laboratorio.

- a. CRAM, E. B. & FOLAN, J. P., 1939.—“Intestinal helminths found in boys recently arrived in Washington, D.C., from various parts of the United States.” 5 (5), 243-256.

396—Revista Médico-Quirúrgica de Patología Femenina.

- a. CASET, E. & TROPEANO, A., 1939.—“Consideraciones sobre equinococo-diagnóstico.” 13 (2), 182-188.

397—Revue Française d'Endocrinologie.

- a. BLUM, A., BOQUET, R. & HANTCHEFF, 1939.—“A propos d'un cas rare de kyste hydatique de corps thyroïde.” 17 (2), 108-115.

* Original not available for checking or abstracting.

(397a) [This paper appears also in *Revue médicale de Nancy*, 1939, 67, 536-542.]

398—Riforma Medica.

- a. BOLOGNA, M., 1939.—“ Osservazioni clinico-chirurgiche sull'ascaridosi.” 55 (29), 1099-1110.

399—Rivista di Chirurgia.

- a. FERRANDU, S., 1939.—“ Per l'interpretazione patogenetica delle cisti da echinococco vertebrali e pararenali.” 5 (1/2), 40-64.

400—Rivista Italiana di Ginecologia.

- *a. PUXEDDU, E., 1939.—“ Rilievi anatomo-clinici sull'echinococcosi pelvi-peritoneale e genitale muliebre (echinococcosi secondaria).” 22, 312-326.

401—Rivista di Patologia Nervosa e Mentale.

- *a. RUBINO, A., 1939.—“ Cisti idatidea del IV ventricolo con leptomeningite otto chiasmatica : studio anatomo-clinico.” 53, 249-288.

402—Röntgenpraxis.

- a. HORMUTH, V., 1939.—“ Zur Röntgendiagnostik des vereiterten Leber-echinokokkus.” 11 (6), 353-355.
b. MOHR, W., 1939.—“ Verkalkte Medinawürmer in der Rückenmuskulatur.” 11 (6), 361-363.

403—România Medicală.

- *a. STOIANOVICI, A., 1939.—[Case of verminous meningitis.] 17, p. 67.

404—Sang.

- a. CHEVALIER, P. & BRUMPT, L., 1939.—“ L'estomac dans l'anémie ankylostomique et quelques remarques sur cette anémie.” 13 (3), 331-334.

405—Schweizerische Medizinische Wochenschrift.

- a. GALLI-VALERIO, B., 1939.—“ Notes sur quelques cas de parasitisme.” 69 (45), 1153-1155.

(405a) So far as helminths are concerned, Galli-Valerio's miscellaneous notes touch very cursorily upon : a case of pernicious anaemia due to the small variety, *tenella*, of *Diphyllbothrium latum* ; another anaemia due to *Taenia saginata* ; the use of Violani as a taeniafuge ; the commonness of *Oxyuris* ; *Ascaris* and geophagy ; fluke eggs in therapeutic liver leading to misdiagnosis ; and the hysterical patient who systematically mixed earth-worms with his stool.—

B.G.P.

406—Scientific Agriculture.

- a. GRIFFITHS, H. J., 1939.—“ Distribution of *Fasciola hepatica* Linn. and its potential vectors in Canada.” 20 (3), 166-169.

* Original not available for checking or abstracting.

(406a) Griffiths briefly outlines the distribution of *Fasciola hepatica* in Canada where, since it was first recorded by Hadwen (1916) from British Columbia, it has been found on both shores of the Lower St. Lawrence near Quebec, and probably in New Brunswick. "All cases appear to be confined to the coastal region. It has yet to be reported from the Prairie Provinces and Ontario." He lists the known intermediaries in the U.S.A. and mentions Canadian provinces in which these snails occur.

B.G.P.

407—Semana Médica.

- *a. NISEGGI, C. H. & QUIRÓS, J. B. DE, 1939.—"Sobre un caso de hidatidosis cardíaca." Year 1939, 1, 693-705.
- *b. BARROS, M. & DONIN, L., 1939.—"Sobre un caso de strongyloidiasis intestinal: estudio clínico y parasitológico." Year 1939, 1, 778-787.
- *c. BACIGALUPO, J., 1939.—"Hormigas del género *Pheidole* como huéspedes intermediarios de cestodos de la familia Davaineidae." Year 1939, 1, 878-880.
- *d. BACIGALUPO, J., 1939.—"El *Dyscinctus gagates* Burm, huésped intermediario de la *Hymenolepis diminuta* (Rudolphi)." Year 1939, 1, 1318-1319.

408—South African Medical Journal.

- a. MEILLON, B. DE & HOLLAND, E., 1939.—"Helminthological notes from Zululand." 13 (24), 798-802.

(408a) The faeces of 160 Zulu hospital patients from the neighbourhood of Eshowe were examined for helminth eggs. Of these 50% harboured *Ascaris lumbricoides*, 10% hookworm (species undetermined), 30% *Trichuris*, 10% *Taenia* (sp. inq.), 4% *T. saginata*, 3.6% *Strongyloides*, 2.5% *Enterobius*, 2% *Ternidens deminutus*, 2.5% *Heterodera radiculicola*, 0.6% *Fasciola hepatica*, 0.6% *Schistosoma haematobium*, while 3% out of 95 examined showed *S. haematobium* eggs in the urine. Cases of creeping eruption occurred in several Europeans but none were noticed in Zulus.

R.T.L.

409—Southern Medicine and Surgery.

- *a. BROWN, H. W. & SHELDON, A. J., 1939.—"Survey of intestinal helminths in Orange County, North Carolina." 101, 380-382.

410—Taiwan Igakkai Zassi.

- a. KINUGASA, M., 1939.—"Investigations on the incidence of lung fluke disease (*Paragonimus westermani*) in Sintiku Prefecture. II. On its incidence in the population in Sintiku Prefecture." 38 (10), 1445-1451. [In Japanese: English summary pp. 1450-1451.]
- b. YOKOGAWA, S. et al., 1939.—"Epidemiological investigation on *Wuchereria bancrofti* in Hoko Island (Pescadores)." 38 (10), 1452-1466. [In Japanese: English summary pp. 1465-1466.]
- c. MATUMOTO, T., 1939.—"A kind of Acanthocephala firstly found in rats in Formosa: *Moniliformis dubius* (Van Cleave) 1924." 38 (10), 1467-1470. [In Japanese: English summary p. 1470.]
- d. TOMITA, S., 1939.—"On the species of *Strongyloides* harbouring in Formosan pig and monkey." 38 (11), 1613-1624. [In Japanese: English summary p. 1624.]
- e. OHAMA, S., 1939.—"Investigation on the incidences of *Wuchereria bancrofti* among primary school children in Yaeyama, Okinawa Prefecture." 38 (11), 1625-1632. [In Japanese: English summary p. 1632.]

* Original not available for checking or abstracting.

(410d) Tomita has examined the species of *Strongyloides* occurring in the pig and monkey in Formosa. No conspicuous morphological differences could be found to separate the parasitic or non-parasitic forms from the two hosts but, according to the author, the measurements of the various forms showed that the species found in the pig was *S. papillosus* and that in the monkey *S. fülleborni*. W.P.R.

(410e) Ohama investigated the incidence of *Wuchereria bancrofti* in 351 primary school children in Yaeyama by examination of peripheral blood taken at night. The average infection rate was 14.8%, with a slightly higher rate in female children (16.18%) than in males (13.48%). The majority of cases had very light infections. Infection incidence according to age showed a gradually increasing degree with advancing age. J.J.C.B.

411—Tea Quarterly.

- a. GADD, C. H., 1939.—“A destructive root disease of tea caused by the nematode *Anguillulina pratensis*.” 12 (3), 131-139.

(411a) Gadd has found that *Anguillulina pratensis* seriously affects tea bushes on certain estates in Ceylon. The chief above-ground symptom of attack is a yellowing of the leaves leading to a thin unthrifty appearance of the bushes. Yields from such bushes may be considerably reduced. The seat of attack is the feeding roots, the cortex of which is invaded and destroyed. All stages of the parasite occur abundantly at the junction of diseased and healthy cortical tissues. The general problem of the control of the parasite when infecting perennial plants such as tea and coffee is discussed. T.G.

412—Technical Bulletin. Michigan State College Agricultural Experiment Station.

- a. FISHER, L. W., 1939.—“Studies of the eastern ruffed grouse (*Bonasa umbellus umbellus*) in Michigan.” No. 166, 46 pp.

(412a) While investigating the causes of fluctuations in the abundance of ruffed grouse, *Bonasa umbellus umbellus*, in Michigan, 6 helminths and some cysts containing unidentifiable trematodes were found. *Cheilosporira spinosa* was the commonest find, followed by *Ascaridia lineata*. *Oxyspirura petrowi*, *Dispharynx spiralis*, *Thominx annulata* occurred less frequently, and cestodes were represented only by *Davainea tetraoensis*. Birds were examined in 4 consecutive years but only in the month of October. It is assumed that parasites may be a major factor in the decimation of the population. P.A.C.

413—Technical Bulletin. United States Department of Agriculture.

- a. SHORB, D. A., 1939.—“Differentiation of eggs of various genera of nematodes parasitic in domestic ruminants in the United States.” No. 694, 10 pp.

(413a) The eggs of various nematodes, belonging to 15 genera, which occur in the alimentary tract of domesticated ruminants in the United States are differentiated on size, shape, colour, thickness of shell and stage of development. These characteristics are set out in tabular form and a key for their differentiation is given. R.T.L.

414—Transactions of the American Microscopical Society.

- a. WALKER, J. H., 1939.—“Experimental studies on trematodes belonging to the subfamily Reniferinae.” 58 (4), 404-430.
- b. RANKIN, jr., J. S., 1939.—“Studies on the trematode family Microphallidae Travassos, 1921. I. The genus *Levinseniella* Stiles and Hassall, 1901, and description of a new genus *Cornucopula*.” 58 (4), 431-447.
- c. SCHULTZ, R. L., 1939.—“A new tapeworm from Swainson's hawk.” 58 (4), 448-451.
- d. STEELMAN, G. M., 1939.—“A new cestode from the Texas horned lizard.” 58 (4), 452-455.
- e. CABALLERO Y C., E., 1939.—“A new filariid worm from Mexican bats.” 58 (4), 456-458.

(414a) The egg, miracidium and the mother and daughter sporocysts of *Renifer aniarum* from *Natrix cyclopion* have been redescribed. There is no free existence of the miracidium outside the intermediate host *Physa halei*. The known life-histories of the Reniferinae are summarized. R.T.L.

(414b) The generic definition of *Levinseniella* is revised, the diagnostic characters of the 7 species are summarized and an 8th form, *L. carcinidis* n. sp. from *Actitis macularia* and other birds, is described. A metacercaria apparently of this species occurs in the green crab *Carcinides maenas*. Four species formerly in *Levinseniella* are transferred to a new genus *Cornucopula* with *C. jägerskioldi* (Travassos, 1921) as type. A 5th species *C. sippi-wissettensis* n. sp. is added from *Actitis macularia* and *Charadrius melodus*. R.T.L.

(414c) *Idiogenes buteonis* n. sp. occurs as a heavy infection in the hawk *Buteo swainsoni* in Oklahoma. Noteworthy is the absence of a pseudoscolex. The suckers are armed. R.T.L.

(414d) *Oochoristica parvovaria* n. sp. is described from *Phrynosoma cornutum*. Twenty-six species have now been recorded from reptilian hosts in addition to many from mammals. R.T.L.

(414e) *Litomosoides leonilavazquezae* n. sp. is described from the bat *Macrotus mexicanus mexicanus* collected from the cave of “Calicanto” in Mexico. R.T.L.

415—Transactions of the Medical Society of London.

- a. MANSON-BAHR, P. H., 1939.—“*Filaria bancrofti*.” [Demonstration.] 62, 72-73.

416—Transactions of the Royal Society of Tropical Medicine and Hygiene.

- a. KNOTT, J., 1939.—“Filariasis of the testicle due to *Wuchereria bancrofti*.” 33 (3), 335-347.
- b. SENEKJI, H. A., BOSWELL, C. & BEATTLE, C. P., 1939.—“The incidence of intestinal parasites in Iraq.” 33 (3), 349-352.
- c. VASSALLO, S. M., 1939.—“Creeping eruption.” [Correspondence.] 33 (3), p. 359.
- d. YOKOGAWA, S., 1939.—“Transmission of *W. bancrofti*.” [Correspondence.] 33 (3), 363-364.

(416b) The results of faecal examinations for protozoa and helminth infections of young adults in Iraq are tabulated. 84.5% were found to harbour some type of intestinal parasite. *Ancylostoma duodenale* occurred in 25.6%, *Ascaris lumbricoides* in 13.6%, *Trichuris* in 3.4%, *Enterobius* in 1.6%, *Strongyloides* in 0.7%, *Hymenolepis nana* in 2.1%, *Taenia saginata* in 0.6% and *Dicrocoelium* in 0.1%. The low incidence of *Taenia saginata* as compared with the neighbouring countries of Lebanon and Syria, where the incidence is 10%, is due to the fact that the Iraqis almost invariably eat meat cooked whereas the Syrians and Lebanese frequently eat raw meat.

R.T.L.

(416c) Of 22 cases of creeping eruption treated by X-ray only 2 required a second application. The irritation ceased within 2 or at most 3 days. The radiation lasted 30 seconds, the distance of the tube was 30 inches, with 70 kilo volts, 5 milli-amperes through a 5 mm. filter.

R.T.L.

(416d) Mature *Filaria* larvae dissected from mosquitoes in saline did not penetrate the skin of mice or man. Larvae set free from the proboscis of infected mosquitoes do not die so rapidly but are capable of penetrating the orifice of the puncture-wound of a bite only exceptionally and when the superficial epithelium has been shed. In mice the larvae which succeed in penetrating into the subcutaneous tissue do not develop. From experimental infections on volunteers it was found that embryos appeared in the night blood in 82 and 111 days after infection. Yokogawa is of opinion that the larvae may become adult and produce microfilariae in 20 to 30 days and that periodicity is chiefly due to diurnal and nocturnal alteration in the physiological function of the reticulo-endothelial system.

R.T.L.

417—Tri-State Medical Journal.

- *a. WRIGHT, H. E., 1939.—“Some varied clinical manifestations of intestinal parasitism.” 11, p. 2316.

418—Tunisie Médicale.

- *a. BIECHELER & LAFOURCADE, 1939.—“A propos d'une observation de kyste hydatique suppuré du rein chez un enfant de 5 ans.” 33, 16-24.

419—United States Naval Medical Bulletin.

- a. SAPERO, J. J. & JOHNSON, C. M., 1939.—“*Endameba histolytica* and other intestinal parasites. Incidence in variously exposed groups of the Navy.” 37 (2), 279-287.

420—Urologic and Cutaneous Review.

- a. CAWSTON, F. G., 1939.—“Antimony ointment in schistosomiasis.” 43 (7), 468-469.

421—Veterinarski Arhiv.

- a. ERLICH, I. & MIKAČIĆ, D., 1939.—“Entoparazitička fauna naše kokoši.” 9 (11), 551-580. [French summary pp. 579-580.]

* Original not available for checking or abstracting.

(421a) Examinations of the intestines of chickens in Yugoslavia by Erlich & Mikačić indicate that *Heterakis gallinae* is probably the most common parasite. Cestodes, however, chiefly species of *Hymenolepis* and *Railletina*, were extremely abundant. In all 19 species of helminths were recovered and identified and there were also larvae of a spirurid occurring in nodules in the mesentery and crop. Infections with more than one species were the rule. They estimate that death had directly resulted from infections with the following species: *Hymenolepis carioca*, *Choanotaenia infundibulum*, *Davainea proglottina*, *Railletina echinobothrida*, *Ascaridia lineata* and *Capillaria longicollis*.

P.A.C.

422—Veterinary Bulletin. U.S. Army. Washington.

- a. McNELLIS, R., 1939.—“Trichinosis.” 33 (4), 306-316.

423—Veterinary Journal.

- a. FRASER, A. H. H., THOMSON, W., ROBERTSON, D. & GEORGE, W., 1939.—“Nutritional condition of lambs and their susceptibility to artificial insemination.” 95 (10), 406-412.

(423a) [For abstract of this paper see Helm. Abs., Vol. VII, No. 327a.]

424—Veterinary Medicine.

- a. HARWOOD, P. D., HABERMANN, R. T. & JERSTAD, A. C., 1939.—“Efficacy of commercial phenothiazine in the removal of roundworms from sheep.” 34 (7), 440-443.
- b. MOORE, N. B. & SCHOOLEY, M. A., 1939.—“*Diocotophyme renalis* in a dog.” 34 (7), 452-453.
- c. VAN VOLKENBERG, H. L., 1939.—“Species of helminth parasites of domestic animals in Texas.” 34 (8), 465-467.
- d. WHITNEY, L. F., 1939.—“Hydrogen peroxide as a general anthelmintic for dogs.” 34 (9), 560-568.
- e. WHITNEY, L. F., 1939.—“Tetrachlorethylene as an anthelmintic for small puppies.” 34 (11), 662-664.
- f. STOUDEMIRE, W. F., 1939.—“*Dirofilaria immitis* in a dog.” 34 (11), p. 667.
- g. STAFSETH, H. J., 1939.—“Tapeworm infestation in poultry.” 34 (12), 763-765.

(424a) Ten sheep fasted for 24 hours were given a small feed of equal parts of oats, bran, alfalfa meal and molasses to which Phenothiazine 20% by weight was added. This mixture was consumed in some cases within a few hours but in others not until one or two days had elapsed. The animals were kept on concrete for 7 or 8 days after treatment and then killed and the gastro-intestinal tract examined for helminths. This technique yielded results reasonably accurate for species of *Oesophagostomum*, *Bunostomum* and *Chabertia* but the effects of Phenothiazine on the *Trichostrongylidae* could not be determined accurately. Doses of 0.5 g. per pound body weight were effective for the removal of oesophagostomes and moderately effective against hookworms. The method did not permit of an exact determination of its efficacy against *Haemonchus* and *Ostertagia* but it appeared to be 100% effective for the former and 80% for the latter: 0.25 g. per pound body weight was much less effective. Owing to the light and bulky nature of the chemical a practical method of administration has not yet been developed.

· R.T.L.

425—Vrachebnoe Delo.

- a. KALYUS, V. A., 1939.—[Clinical and epidemiological study of a case of trichinelliasis in man.] 21 (2/3), 149-154. [In Russian.]
- b. KLASSEN, I. I., 1939.—[A case of hydatidosis of the spleen.] 21 (2/3), 169-172. [In Russian.]

426—Wiadomości Weterynaryjnych.

- a. MATERNOWSKA, I., 1939.—“Próby analizy odczynu śródskórnego przy schorzeniach pasożytniczych.” 18 (227), 233-243. [German summary p. 243.]

(426a) [“Analysis of the intradermal reaction in parasitic diseases.”
For abstract of this paper see Helm. Abs., Vol. VII, No. 726i.]

427—Wiener Klinische Wochenschrift.

- a. BUINEWITSCH, K., 1939.—“Ueber einige Erkrankungen als Folge der Tierinfektion. (Aus klinischen Beobachtungen).” 52 (26), 613-617.

428—Yale Journal of Biology and Medicine.

- a. BLUMER, G., 1939.—“Some remarks on the early history of trichinosis (1822-1866).” 11 (6), 581-588.

429—Zentralblatt für Allgemeine Pathologie und Pathologische Anatomie.

- a. TAKAMATSU, H., 1939.—“Ueber einen Sektionsfall von generalisierter Cysticerkose.” 72 (1), 2-5.

430—Zentralblatt für Bakteriologie. Abteilung 1. Originale.

- a. SCHMIDT-RIES, H., 1939.—“Die bisher bei dem kleinen Tümmler (*Phocaena phocaena* L.) festgestellten Parasiten.” 145 (2), 89-106.

(430a) Schmidt-Ries's list of helminths from the porpoise, *Phocaena phocaena*, is based both on a review of the literature and on his own examinations of material, chiefly from the East Prussian coast. The list contains 2 trematodes, 3 cestodes, 8 nematodes and 2 acanthocephala. There are no new species, but *P. phocaena* is recorded for the first time as a host of *Diphyllbothrium lanceolatum*. Contrary to Baylis's view [Parasitology, 1916, 8, p. 370], *Porrocaecum decipiens* is considered to be a common parasite of *P. phocaena*.

A.E.F.

NON-PERIODICAL LITERATURE

- 431—FREITAS, J. F. TEIXEIRA DE & LENT, H., 1939.—“Considerações sobre algumas espécies americanas do genero *Haematoloechus* Looss, 1899 (Trematoda: Plagiorchoidea).” Livro de Homenagem aos Professores Alvaro e Miguel Ozorio de Almeida, Rio de Janeiro, pp. 246-256.

Freitas & Lent list 29 species of the genus *Haematoloechus*. Twenty-three species are placed in the subgenus *Haematoloechus* and 6 species in the subgenus *Ostiolum*. This list includes two new species, viz., *H. (H.) ozorioi* n. sp. in *Leptodactylus ocellatus* from Montevideo and *H. (H.) lutzi* n. sp. in an undetermined species of frog from Venezuela. These new forms together with *H. (H.) neivai*, *H. (H.) varioplexus* and *H. (Ostiolum) medioplexus* are described and illustrated.

R.T.L.